AC 30
1972/73
UG
Day
C1

niversity of New Haven

1972-73

University of New Haven

1972-73

LIBRARY
UNIVERSITY OF NEW HAVEN

University of New Haven
Day Division
Catalog 1972-1973

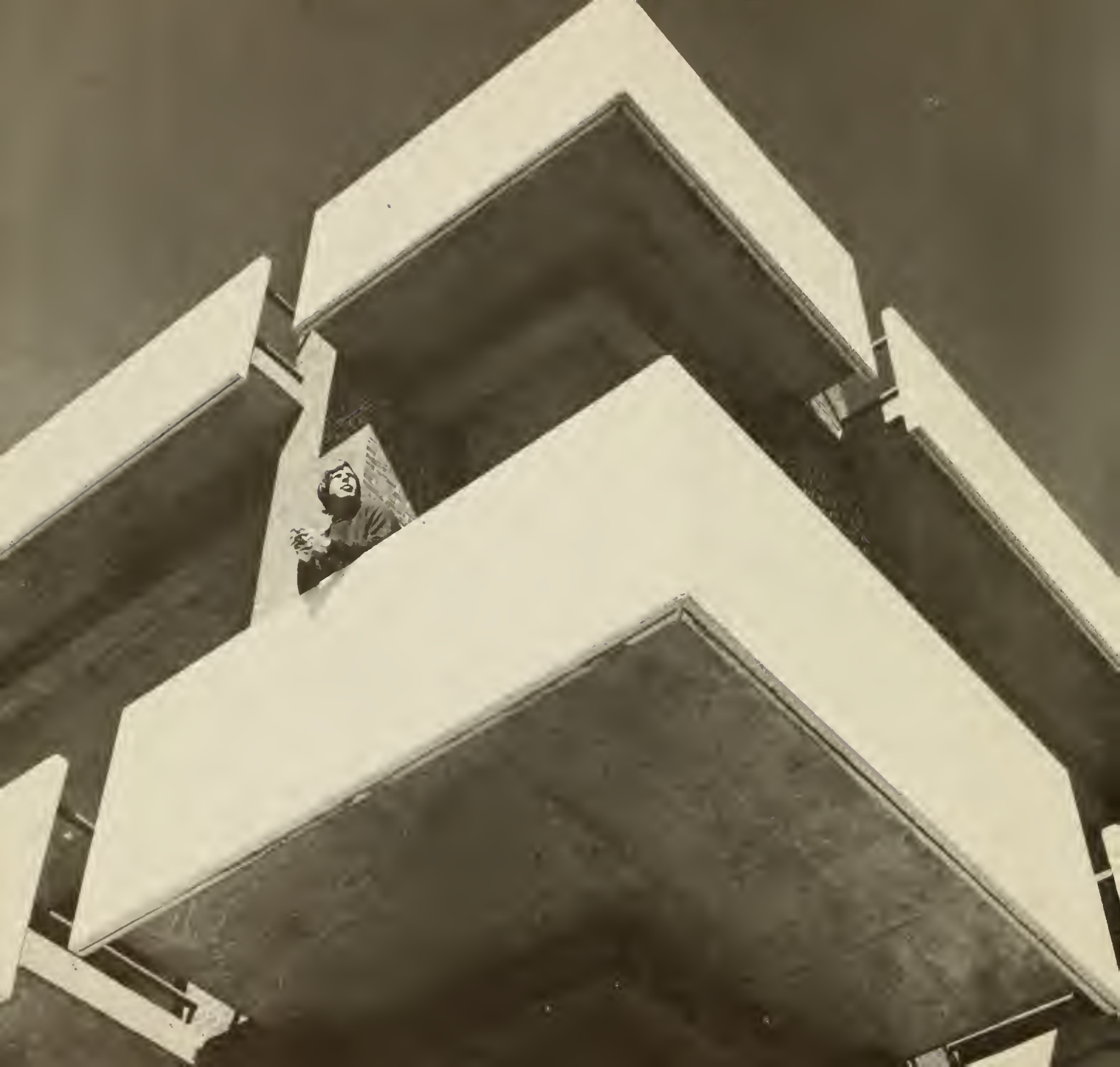


TABLE OF CONTENTS

Academic Calendar 6

General Information 7

Academic Programs

- School of Arts and Sciences 35
- School of Business Administration 47
- School of Engineering 59

Description of Courses 69

The Board of Governors 111

Administration 113

Advisory Councils

- Alumni 118
- Engineering 119
- Management Center 121
- Public Administration 122
- Social Services 123

Faculty 125

Map 136

Index 137

HISTORY

University of New Haven is the new name for an institution which for half a century prior to 1970 was known as New Haven College. Founded in 1920 by the Y.M.C.A. as a branch of Northeastern University, its early years were inconspicuous and its growth was slow. But it served a desperate need, functioning as a community college to provide an education for many who could not afford the time or tuition demanded by regular four-year colleges and universities. New Haven College had then, as the University of New Haven has now, a strong sense of responsibility to the community.

In 1926 the college was incorporated by an act of the Connecticut Legislature and was authorized to grant the Associate in Science Degree. At the same time an agreement was reached with Yale for the use of its classrooms and laboratories during evening hours, augmenting cramped and inadequate quarters which moved from building to building on various streets through the years. With the use of the Yale facilities the College was able to build a sound educational program in cooperation with local business and industry.

From 1941 to 1945 New Haven College administered the Official Yale University Engineering, Science, Management, and War Training Programs for New Haven County. In 1948 the College took a significant step forward with accreditation of its Associate in Science degree program by the New England Association of Colleges and Secondary Schools.

During the next decade several new programs were inaugurated. These were The Reading Center, The Division of Special Studies, and the School of Executive Development—now the Management Center. Two daytime programs for recent high school graduates were instituted: Industrial Administration, and Industrial Engineering.

In 1958 New Haven College was authorized by the Connecticut General Assembly to offer courses of study leading to the Bachelor of Science degree to both day and evening students. In 1960 the College acquired the present West Haven Campus and began a decade of rapid growth. Programs for full-time students were expanded and new courses made available in other credit and non-credit curricula. The acquisition of 28 acres of undeveloped land near the main campus in 1962 made possible construction of playing fields, tennis courts, and a new Physical Education-Auditorium Building which has recently been dedicated. Most recently the University has engaged architects for the design of a new $1,500,000 library which is scheduled for completion by the fall of 1973.

The College received full accreditation in 1966 when the New England Association of Colleges and Secondary Schools accredited its Bachelor degree programs. Full accreditation enabled the College to work more effectively towards the achievement of its principal objectives: to provide leaders and professional personnel with an understanding of important cultural and scientific progress, and to encourage students to reach the maximum of their potential.

A new and major addition to the College came in 1969 when the Graduate School was established with programs offered initially in Business Administration and Industrial Engineering. This school has undergone rapid growth, adding new programs and increasing its enrollment to its present level of more than 600 students.

In October, 1970, the Board of Governors of New Haven College voted to change the name of the institution to The University of New Haven and this action was subsequently approved by the State of Connecticut.

CALENDAR

DAY CREDIT DIVISION

Summer Session 1972

Registration period	Tuesday-Wednesday	May 30-31
Tuition due on or before	Wednesday	May 31
Classes begin	Monday	June 12
Holiday	Tuesday	July 4
First term final examinations	Monday	July 17
Second term classes begin	Wednesday	July 19
Second term final examinations	Wednesday	August 23

Fall Semester 1972

*Tuition due—all students	Friday	August 18
Residence charges due	Friday	August 18
Labor Day (holiday)	Monday	September 4
Orientation first year students	Tuesday	September 5
Classes begin	Wednesday	September 6
Last day to add courses	Friday	September 15
Registration for spring—current students	Tuesday-Thursday	November 28-29-30
Thanksgiving (holiday)	Thursday-Friday	November 23-24
Registration for spring—new students		December-January
Classes end	Friday	December 15
Final examinations	Saturday-Saturday	December 16-23
Last day of semester	Saturday	December 23

Spring Semester 1973

*Tuition due—all students	Friday	January 5
Residence charges due	Friday	January 5
Orientation, new students	Wednesday	January 17
Classes begin	Thursday	January 18
Last day to add courses	Thursday	February 1
Washington's Birthday (Holiday)	Monday	February 19
Spring vacation	Saturday-Sunday	March 24-April 1
Classes resume	Monday	April 2
Registration for fall—current students	Tuesday-Wednesday-Thursday	April 24-25-26
Good Friday (holiday)	Friday	April 20
Classes end	Friday	May 11
Final examinations	Saturday-Friday	May 12-18
Last day of semester	Friday	May 18
Registration for fall—new students		June-August
Commencement	Sunday	June 3

Summer Session 1973

Registration period	Tuesday-Wednesday	May 29-30
Tuition due on or before	Wednesday	May 30
Classes begin	Monday	June 11
Holiday	Wednesday	July 4
First term final examinations	Monday	July 16
Second term classes begin	Wednesday	July 18
Second term final examinations	Wednesday	August 22

* Students admitted after August 18 (first semester) or January 2 (second semester) must register and pay tuition within ten days of admission and in no case later than the opening day of classes.

DIVISIONS OF THE UNIVERSITY

The University of New Haven has four administrative divisions: The Day credit division, the Division of Continuing Education, the Graduate School, and the Management Center. Included in the Division of Continuing Education are the Evening Credit Program, the Extension Credit Programs, the Summer School, the Division of Special Studies, and the Reading Center. All divisions of the University are coeducational.

UNDERGRADUATE CREDIT PROGRAMS — DAY

Day The degree-granting Day division offers curricula which lead to the four-year Bachelor degree and the two-year Associate degree.

Students pursuing a course of studies leading to a Bachelor of Science degree in Business Administration may elect a major in Accounting, Criminal Justice, Economics, Finance, General Management, Hotel Management, Operations Management (including Computer Concentration), Marketing, or Public Administration.

Students pursuing a course of studies leading to a Bachelor of Science degree in Engineering may elect a program in Civil, Electrical, Industrial, Materials or Mechanical Engineering.

Students pursuing a course of studies leading to a Bachelor of Arts degree may elect a major in Art, Biology, Chemistry, Economics, English, Environmental Studies, History, Mathematics, Physics, Political Science, or Sociology and Social Welfare. By taking a modified program in either Chemistry or Physics the student may receive a Bachelor of Science degree. A student may also elect to pursue an interdisciplinary course of study leading to a Bachelor of Arts degree in American Studies.

An Associate in Science degree may be obtained in Business Administration, Engineering Science, Law Enforcement, Correctional Administration, or Arts and Sciences.

Students pursuing a course of studies leading to an Associate in Science degree in Arts and Sciences may elect a major in Biology, General Studies, Commercial and Advertising Art, or Journalism.

UNDERGRADUATE CREDIT PROGRAMS — EVENING

Evening The degree-granting Evening Division offers curricula which lead to a Bachelor of Science, a Bachelor of Arts, and an Associate in Science degree.

A Bachelor of Science degree is offered in the following areas: Business Administration with majors in Accounting, Criminal Justice, Eco-

DIVISIONS
UNDERGRADUATE CREDIT PROGRAMS — EVENING

nomics, General Management, Operations Management (including Computer Concentration), Marketing, and Public Administration; Civil, Electrical, Industrial, Materials, and Mechanical Engineering. Criminal Justice majors are Law Enforcement Administration, Forensic Science, and Correctional Administration.

A Bachelor of Arts degree may be obtained in the following majors: Biology, Chemistry, Economics, English, History, Political Science, Psychology, and Sociology and Social Welfare.

An Associate in Science degree is offered in the following areas: General Studies; General Management; Engineering with a major in General, Electrical, Industrial, Mechanical, or Metallurgical Engineering; and Criminal Justice.

For further information regarding the Evening Division, see the **Evening Division Bulletin** which may be obtained at the University or write to the Director of Continuing Education.

GRADUATE SCHOOL

The Graduate School currently offers programs leading to the degrees of Master of Business Administration, Master of Science in Industrial Engineering, Master of Public Administration, and Master of Science in Criminal Justice.

Prospective students seeking detailed statements on any of the above graduate programs and an application blank should write or call: Dean of the Graduate School, University of New Haven, 300 Orange Avenue, West Haven, Conn. 06516, telephone (203) 934-6321, ext. 280.

DIVISION OF SPECIAL STUDIES

This Division offers a series of professional certificate courses in engineering, business, and general areas. They are usually designed to provide supplemental knowledge and skills needed in specialized jobs in business and industry, and do not carry academic credit. Further information may be obtained by requesting separate schedules and course folders from the Director of the Division of Special Studies.

MANAGEMENT CENTER

The purpose of the Management Center is to provide educational opportunities for those managers and administrators in industry, business, and service organizations whose needs are not met in more conventional undergraduate or graduate programs. The overall objective of the Center is to offer programs to help managers of maturity and experience meet the broader and more complex requirements of positions of greater responsibility in their organizations.

Broadly speaking, the programs of the Center are designed to meet the needs of two different levels of management, 1) that of staff and line executives at upper levels, and 2) middle management administrators. At the upper executive level the programs consist of seminars and workshops of varying lengths as needed. At the middle management level the standard format is a part-time on-campus program. Also planned are in-plant programs in which the curriculum will be specifically designed to meet individual company or industry needs. In addition there are special programs available on an ad hoc basis, either on or off campus, as required.

ACCREDITATIONS AND MEMBERSHIPS

The University of New Haven is a coeducational, non-sectarian, independent institution of higher learning chartered by the Legislature of the State of Connecticut and fully accredited by the Connecticut State Department of Education. The University holds membership in the New England Association of Colleges and Secondary Schools, the Association of American Colleges, the Connecticut Conference of Independent Colleges, College Entrance Examining Board, and is also a member of New England and national professional organizations.

The New England Association of Colleges and Secondary Schools accredits schools and colleges in the six New England States. Membership in one of the six regional accrediting associations in the United States indicates that the school or college has been carefully evaluated and found to meet standards agreed upon by qualified educators. Colleges support the efforts of public school and community officials to have their secondary schools meet the standards of membership.

ADMISSION

Since each program of the University has its own admission requirements, these requirements are defined in detail in subsequent pages of this catalog.

In general, graduates of accredited secondary schools are eligible for admission. However, in special cases persons who have not completed their high school education may be admitted to the various divisions of the University of New Haven by meeting certain specified conditions.

In the case of adults, the University is interested in evidence of maturity and motivation as well as in formal education as prerequisites for admission.

With the exception of "auditors," students wishing to take any course, whether or not they seek a degree, must satisfy the admission requirements.

The University of New Haven welcomes the applications of students from all geographic areas, from public or private schools, and from all races, economic levels, and religions.

ADVANCED PLACEMENT

The University recognizes the program of Advanced Placement available to talented high school students, operated by the College Entrance Examination Board. Students satisfactorily completing Advanced Placement courses in high school and the final examination prepared by the Educational Testing Service may be given appropriate college credit if their courses are similar to those offered at the University of New Haven.

Advanced Placement courses are graded from 1 to 5. Credit is allowed where the grade earned is 3, 4, or 5. Credit may be given for a grade of 2 if a careful review of the test by this university determines acceptability. No credit will be allowed for a grade of 1. Students desiring to submit Advanced Placement courses for college credit should have all results of these courses and tests sent in connection with their application to the Admissions Office.

PRE-PROFESSIONAL PROGRAMS

In addition to the traditional professions such as law, medicine, public service, and the ministry, more and more vocations require that students continue their training after earning the Bachelor degree. Students who wish to begin training for a profession at the graduate level should write to the university they expect to attend and ask for a statement of the entrance requirements. Prescribed programs in the major areas will be modified to meet requirements for entrance into professional programs or to meet the special needs of individual students. Such programs must be approved in writing by the Director of Student Services and by the appropriate department chairman.

ADMISSION OF STUDENTS TRANSFERRING FROM OTHER COLLEGES

Requirements Transfer students may apply to the University of New Haven after successfully completing one or more semesters at an accredited college. Generally speaking, transfer credit will be granted for courses in which the student has obtained a grade of "C" or better in a subject which is similar in content to one given in a major at the University of New Haven or is an acceptable elective.

In accordance with the requirements of a particular department, a student may be required to take an English or a Mathematics examination.

Advanced Standing Transfer credit from other colleges will be officially granted upon the completion of 12 semester hours at the University of New Haven with a satisfactory academic record.

Transfer students who wish to fulfill the requirements for the Bachelor degree or the Associate degree at the University of New Haven must complete the last 30 semester hours of their program at the University of New Haven. Also, for Associate degrees 12 semester hours must be in the field of specialization, and for Bachelor degrees 18 semester hours must be in the field of specialization.

CREDITING EXAMINATIONS

A student who has independent knowledge of the content of an undergraduate course offered by the University may, with the approval of the respective department chairman and dean, take a special crediting examination in lieu of taking the course.

No student may take crediting examinations during the first or last semesters in which he is enrolled. To graduate he must earn at least 30 semester hours through regular course work.

ADMISSION PROCEDURE

1. Write or telephone the University for information and, if you desire, arrange for an interview. Telephone (Area Code 203) 934-6321.
2. Secure an application form from the Admissions Office of the University or from your high school guidance counselor.
3. Submit the completed application form with a $15 application fee. This fee is not refundable.
4. Request your school to submit a transcript of your secondary school record.
5. Submit College Board test scores (S. A. T.), A. C. T., or University of New Haven test scores.

12 REGISTRATION

Degree and Non-Degree Students There are two parts to registration: the completion of the registration forms and the payment of tuition. Both should be completed before the closing date of registration as stated in the calendar. There is a penalty fee for delaying either of these two processes beyond the closing dates of registration.

Registration is possible during office hours on the registration dates stated in the calendar.

New students must register in person at the University office. Currently enrolled evening students may pre-register by mail. Forms are mailed to the student prior to the announced registration dates. For currently enrolled day students, registration dates and procedures will be posted in advance.

A separate registration is required for each of the semesters and for the summer session.

Note: Day division students may register for no more than three evening courses. Any waiver of this regulation must be obtained from the appropriate dean.

CHANGES OF REGISTRATION AND SCHEDULES

Students are urged to plan their programs carefully before completing the registration forms in order to avoid the need for requesting changes. Once the registration is completed, the student is charged the Change of Registration Fee for each change he makes. The fee is payable when the student completes the form requesting the change.

STUDENT SERVICES

Recognizing the importance of non-academic activities to the development of the student, the University offers a well-rounded program of services and activities designed to make assistance available when needed and to provide outlets for maturing student interests.

COUNSELING AND HEALTH

Counseling and Health Services The University of New Haven Counseling Center, located in Room 210 of the Main Building, is a non-academic Counseling Center with psychological, academic, medical, and religious referrals. Counseling at the Center is offered in such areas as personal, marital, and domestic problems, career development, and vocational and psychological testing. By inquiring at the Counseling Center, a student will be referred to the person most qualified to discuss his problem.

In addition to the Counseling Center personnel, members of the faculty and staff reserve many hours for academic counseling.

FOREIGN STUDENT

Foreign Student Adviser The University is fortunate in having a number of other countries represented on the campus. The Foreign Student Adviser provides special guidance when needed. An International Students Club at the University sponsors activities and trips, and the International Students Center of New Haven welcomes all foreign students to use their facilities and program throughout the year.

PLACEMENT

Placement Service Requests are often received from students and employers for job placement services. Although the University does not conceive its function to be that of a public employment service, it is interested in and prepared to render placement service within the limitations of its purpose and resources. It acts as a medium of exchange of information between students and former students who desire placement, and employers seeking personnel. It is particularly interested in helping students to find positions which require college study or which lead to positions that require such education, and in assisting students to find employment related to their programs of study.

A student or former student of the University who desires placement should call at the office for a placement application form and at that time will receive specific information as to whom he is to contact in regard to his placement problem.

A company wishing to use the placement facilities of the University should list the job and the desired qualifications in the form of a letter. A member of the University staff will then contact the company to discuss procedure and possibilities of filling the position.

STUDENT SERVICES

Testing Counselors, upon request, will report and interpret to students the results of their entrance tests.

The Director of Admissions and the Director of Counseling, as professional vocational counselors, are prepared to undertake vocational testing and counseling with students requesting this service.

HOUSING

On-Campus Housing The two-year-old Residence is of modern design containing 16 separate suites. Each suite consists of six double bedrooms opening out to a large living room. Each bedroom contains individual beds, desks, chests, and closets. Laundry facilities, snack bar, and common lounge are also available in the dormitory. The residence is coeducational with males assigned to 13 suites and females assigned to three suites.

Applications will be filled in the order received. To be considered, each application for residence must be accompanied by a $100.00 room reservation deposit. The total deposit is refundable if there is no available space. If space is available, $50.00 will become a damage deposit and the remaining $50.00 will be applied toward the room rent.

The University Residence is closed during the Thanksgiving, Christmas, and Spring recesses.

Off-Campus Housing Due to the limited number of off-campus apartments and rooms in the immediate area, the University is unable to guarantee off-campus accommodations of your choice.

The University Housing Office will have listings of all University approved housing in the general area. These listings will be available in the Housing Office during the latter half of July.

In entering into an arrangement for private housing, the financial terms should be discussed and implemented by the student himself. The University is of course not responsible for these arrangements. but will make every effort to see that the student is treated fairly.

CAFETERIA

Cafeteria Two meal plans are available to all students of the University. The 15-meal plan gives the student three meals per day from Monday through Friday. The 20-meal plan offers the student three meals per day Monday through Saturday and two meals on Sunday. The meal plans offer complete, well-balanced meals for a sizeable savings as compared to buying meals for cash.

All dormitory students are required to have a meal plan and it is suggested that all off-campus residents within walking distance of the University participate in one of the two meal plans.

FINANCIAL AID

Approximately one-half of the students at the University receive financial assistance annually in the form of scholarships, grants, loans, bursary work, and the College Work-Study Program. Applications by returning students should be made no later than April 1 for the following year and by new students before June 1.

Financial aid is not usually available for the summer term or at mid-year. Students needing assistance will ordinarily seek employment during the summer to help defray their expenses for the following year.

Full information and applications for financial aid may be obtained from the Director of Financial Aid.

SCHOLARSHIPS AND AWARDS

Academic Scholarships A number of scholarships are awarded each year on the basis of academic achievement, financial need, evidence of self-help, and overall contribution to the University. To be eligible a student must have a cumulative Quality Point Ratio of 3.0 or better and evidence of financial need.

Donor Scholarships Many scholarship awards are available each year through the generosity of business firms, organizations, and friends of the University.

Amity Charitable Trust Fund—An annual award is made from the income of this fund to worthy students, based on ability, promise, and financial need without regard to sex, race, country of national origin, or religion. Preference is given to students whose homes are in the Greater New Haven area.

SCHOLARSHIPS AND AWARDS

Asarco-Enthone Scholarship—An award of $1,000 is given annually to a student in the field of Chemistry. The recipient must be a male citizen of the United States or Canada in good health. Selection is based on activities as well as scholarship.

Faculty Wives Club Scholarship—This award is given to a student demonstrating outstanding academic achievement as well as need for assistance.

H. B. Ives Company Scholarship Foundation—An annual award of $500 is made to a male undergraduate seeking a degree in engineering, business administration, or management. The recipient must be a resident of New Haven County.

Southern Connecticut Gas Company Scholarship—A Scholarship of one-half year's tuition is sponsored by the Southern Connecticut Gas Company. This award is made annually to an inner-city resident of New Haven meeting need and academic qualifications.

The Martin Luther King, Jr. Memorial Scholarship Fund—Annual awards are available to students entering the University of New Haven who exemplify the ideals of the late Dr. Martin Luther King, Jr. A generous gift from the Guilford Human Relations Council will provide additional awards to New Haven area black students.

The New Haven Chapter of the American Society of Tool Engineers—Annual scholarships to students in mechanical engineering are provided.

The Olin Employees Fund—Full tuition scholarships are offered to sons and daughters of Olin employees meeting the standards of selection.

Virginia M. Parker Scholarship—Established by Chi Kappa Rho sorority, it is awarded annually to a freshman woman selected on the basis of scholarship, potential, and financial need.

Sales and Marketing Executives Club of New Haven—An annual award is open to a superior student in the field of sales and marketing.

Woman's Seamen's Friend Society of Connecticut—Assistance is offered to sons and daughters of merchant seamen of Connecticut and to students preparing for careers in the maritime industry.

Yale University—The scholarship plan for sons and daughters of faculty and staff members of Yale University provides scholarship grants to qualified students.

GRANTS

Grants The University awards a limited number of grants to students who have demonstrated academic promise and financial need, while at the same time contributing substantially to some area of University activity.

Students with extreme needs may qualify for grants of from $200 to $1,000 annually under the Educational Opporunity Grants Program of the Federal government. These grants, matched by other University assistance, are designed to make possible higher education for capable applicants who would otherwise be unable to attend.

Many states and organizations offer scholarships and grants for which UNH students may be eligible. It is suggested that entering students, especially, become aware of any such opportunities for assistance.

LOAN FUNDS

National Defense Student Loans The purpose of this program, established under the National Defense Education Act of 1958, is to make funds available for loans of up to $1,000 annually to needy students with satisfactory academic backgrounds. These loans are repayable starting nine months after graduation at three per cent simple interest. Special forgiving features make this source advantageous to those going into full-time teaching.

United Student Aid Fund This private, non-profit service corporation provides long term, low interest loans to upperclassmen in good standing. Guaranty funds were provided by a donation of the Day Student Council in order for the University to participate.

Guaranteed Loan Programs The State of Connecticut and many other states have established Higher Education Loan Programs offering long term loans at low interest rates. In Connecticut, a student may borrow up to a maximum of $1,500 each school year, repayable starting one year after graduation. If the family's adjusted income is under $15,000 annually, Federal interest benefits cover the full interest while in attendance.

Institute of Electrical and Electronic Engineers

The Connecticut Section of the Institute of Electrical and Electronic Engineers Student Loan Fund offers non-interest bearing loans to senior students in Electrical Engineering.

LOANS

Additional Loans Loan assistance to students in temporary financial difficulty is available through the Roy M. Jenkins Jr. Memorial Fund and the University Emergency Loan Fund. Both of these are administered by the Financial Aid Office.

LAW ENFORCEMENT ASSISTANCE PROGRAMS

Loans The Omnibus Crime Control and Safe Streets Act of 1968 established the Law Enforcement Student Loan Program which makes available ten year, interest bearing (7%) notes of up to $1,800 per academic year to full-time students enrolled in undergraduate and graduate programs leading to degrees in areas directly related to law enforcement. These loans can be canceled at the rate of 25% for each year of employment in a public State, Local, or Federal law enforcement agency.

Grants Grants are available to full-time employees of a publicly funded law enforcement agency under the Law Enforcement Student Grant Program. Payments up to $300 per semester are provided to full-time or part-time students working toward a degree in this field. A recipient must agree to remain with a law enforcement agency for two years after completion of studies funded by this grant.

Financial need and academic qualifications will be considered in selection of candidates.

STUDENT EMPLOYMENT

College Work-Study Program This federal assistance program is designed to enable students having financial need to work both during the summer and through the school year, thus earning a substantial portion of their college expenses. Work assignments are made on campus and also with non-profit community organizations such as Community Progress, Inc., the YMCA, the West Haven Board of Education, New Haven Boys' Club, and others.

Bursary Work The University provides many jobs on campus for deserving students who may benefit from this type of employment. Awards are made each semester ranging from $275 to $325 for working an average of ten hours a week.

STUDENT ACTIVITIES

Student Councils Separate Day and Evening student councils have the responsibility for initiating, organizing, and carrying through extra-curricular activities and for performing liaison functions between students and the University staff.

CLUBS

Clubs and Organizations There are almost 40 University student clubs and societies open to interested students. Included are student chapters of professional societies, religious organizations, social groups, and special interest clubs.

ATHLETICS

Athletic Activities A complete intramural, competitive program is organized and sponsored by the University Physical Education Department. It includes basketball, volleyball, softball, touch football, bowling, golf, tennis, and table tennis. There is also a student-sponsored club football team.

Freshman and varsity intercollegiate athletics schedules include baseball, basketball, golf, hockey, cross country, soccer, and tennis.

In addition to intramural and intercollegiate competition, a planned program of recreation is available.

The University of New Haven is a member of the National Association of Intercollegiate Athletics (NAIA), Eastern College Athletic Conference (ECAC), and the New England College Athletic Conference (NECAC).

FRATERNITIES AND SORORITIES

Fraternities and Sororities Many national and local service, social, and honorary fraternities and sororities are active on campus. They sponsor programs such as the semi-annual Bloodmobile and other services, as well as social functions.

PUBLICATIONS

Publications Student publications include **The News,** the University student newspaper; **The Chariot,** the annual yearbook; and the **Student Handbook.** Any student may volunteer his services on any of the student publications.

SOCIAL

Social Activities Starting with an All-School Picnic, the social calendar is filled with varied events to appeal to all students: weekly mixers, concerts with large and small name attraction, weekly films, free parties to climax each semester, special cultural events, including Non-Western Music Week, Homecoming, and several major drama productions.

STUDENT ACTIVITIES

THE STUDENT CENTER

The Student Center The Student Center provides a focal point for all student activities. Offering lounges, student offices, a game room, a large cafeteria and a snack bar, the facility has been designed to serve as a center for the student's non-academic college interests.

The proposed student-operated University FM radio station, which will serve the student body and the urban community, will be located in the Student Center.

Special art showings and concerts are presented throughout the year. Seminars planned by students and faculty together are held at frequent intervals. Periodically, the President of the University and the Dean of Students meet informally with students to discuss all phases of life at the University.

ASSEMBLIES

Assemblies Assemblies and lectures are held throughout the academic year; notable speakers are presented at frequent intervals.

BOOKSTORE

Bookstore A recent addition to the campus, the University bookstore offers new and used text materials, art and engineering supplies, and a large variety of University emblemed gift items.

STUDENT HEALTH SERVICES

Physical Examination Students are required to provide a report of a recent physical examination to the Health Service upon acceptance. Appropriate forms for this purpose are provided.

Infirmary The Infirmary, located in the Residence, is available for emergency first aid treatment and examination for all students, without charge. Day beds are provided for rest and care of mild illnesses for students living in University approved housing. The University Health Staff, under the direction of the Director of Counseling and Health Services, includes the University internists, nurses, psychiatrists, and psychologist.

INSURANCE

Accident and Health Insurance The University of New Haven Student Insurance Plan is another important service to full-time students and their families. It was conceived and planned by the Student Council and is designed to help full-time students of the University meet unexpected and very often, costly medical bills arising from an accident or when hospital and medical services are required due to sickness.

HEALTH SERVICES

The Plan provides protection while the student is at home, at school, or on vacation, 24 hours a day for a full twelve months. Benefits are payable in addition to those the student may receive from any other policy. Details of the Plan are available in a folder sent to all full-time students or from the University nurse.

LIBRARY

The Library contains more than 68,000 volumes, over 2,000 LP's, extensive corporation annual reports, pamphlet files, and microfilm. About 850 periodicals and extensive back-issue files are maintained.

The resources of the New Haven and West Haven Public Libraries are available to students (non-resident must pay a fee). Under a reciprocal policy, students may charge material from Albertus Magnus and Quinnipiac libraries by presenting their validated ID's. Students may not use the Yale Library, however.

ALUMNI ASSOCIATION

Membership in the Alumni Association is acquired immediately upon graduation. A member of the administrative staff of the University serves as Director of Alumni Relations. An Executive Committee conducts the affairs of the Association during the period between annual meetings and also serves as a planning group. There is an alumni fund chairman for annual giving.

In addition to the annual meeting, other meetings of social and educational interest occur during the year, and a quarterly publication, the **Alumni News,** is mailed without charge to each alumnus.

The Alumni Association is represented on the Board of Governors by the election of a member to the Board for a term of two years. The president of the Association serves on the Board of Governors as an ex-officio member.

ALUMNI ADVISORY COUNCIL

Membership on the Alumni Advisory Council is by invitation. Twenty distinguished graduates of the University presently constitute the group. The Council is an advisory board to the University in the conduct of alumni affairs. Its primary objectives are to strengthen alumni relations, advise on matters of top-level policy involving the alumni, improve communications with them, and assist in planning and conducting alumni events. The Council meets quarterly at the University with the President of the University and the Director of Alumni Relations.

22 SCHOLASTIC REGULATIONS

GRADING SYSTEM

Grading System The following grading system is in use and except where otherwise specified applies both to examinations and to term work. The weight of a final examination grade is a matter individually determined by each instructor.

A Superior

B Good

C Fair

D Lowest passing grade

F Failure or withdrawal after midpoint with unsatisfactory work

Inc. Incomplete. Indicates that some work remains to be completed. Such work must be made up within six months to remove the "incomplete." Otherwise, the "Inc." remains on the student's record for one semester, after which the "Inc." is changed to "F" and no credit is given for the course.

W Withdrawal. Indicates either (1) withdrawal prior to the midpoint of semester or (2) withdrawal after the midpoint of semester and work satisfactory at that time.

S Satisfactory. Given only in non-credit courses.

U Unsatisfactory. Given only in non-credit courses.

Full-time students must complete a minimum of 12 credits per semester to retain their status as full-time students. Completion is defined as receipt of a letter grade (A to F) as opposed to W or Incomplete. A student who loses his full-time status will be placed on proba-

tion. He will be required to write his dean (Admissions) requesting to be allowed to return for the following semester.

No student may enroll in and receive credit for more than 18 credit hours in one semester without written permission of the Dean of his School (19 semester hours for certain engineering programs).

GRADE REPORTS

Grade Reports Reports of the final grade in each subject will be mailed to the student soon after the close of each semester. The same report will be mailed to employers in those instances where the student has given his approval. Reports will be mailed to parents or guardians of all students under 21.

ACADEMIC STANDARDS

Academic Standards The academic standing of each student will be determined on the basis of his quality point ratio each semester.

In order to determine quality point ratios, each letter grade is assigned a quality point value:

A	4 quality points
B	3 quality points
C	2 quality points
D	1 quality points
F	0 quality points

The quality point ratio for all students is obtained by multiplying the quality point value of each grade by the number of semester hours of the course, then dividing the total quality points by the total semester hours.

Students are required to maintain a quality point ratio in accordance with the following scale:

Quality point ratio of 1.50 for 3-30 semester hours attempted
of 1.60 for 31-45 semester hours attempted
of 1.70 for 46-60 semester hours attempted
of 1.80 for 61-75 semester hours attempted
of 1.90 for 76-90 semester hours attempted
of 2.00 for 91 or more semester hours attempted

PROBATION

Failure to earn the required cumulative quality point ratio will place a student on academic probation for the following semester of enrollment. A student is automatically dismissed when he receives a third probation or when his quality point ratio for any one semester is less than 1.00.

SCHOLASTIC REGULATIONS

Transfer Students Academic probation for transfer students is determined in accordance with the same graduated scale as for non-transfer students. In determining a transfer student's academic standing, his total semester hours (those received at another college plus these at the University of New Haven) are applied to the graduated scale. However, only the cumulative average earned at the University of New Haven is considered in determining the student's academic standing.

READMISSION

Readmission Application for readmission after a student has been dismissed will be considered only after the lapse of a semester and only when the student provides evidence which indicates his probable success if readmitted.

Requests for readmission should be submitted in writing to the dean of the academic division involved at least three weeks before the opening of the semester and should include evidence supporting the student's belief that he will succeed if readmitted.

Readmission does not automatically follow; each application is decided individually by the Committee on Academic Standing.

DEAN'S LIST

Dean's List Full-time students who earn a quality point ratio of 3.20 or better in any one semester will be placed on the Dean's List.

All part-time students who have accumulated a minimum of 14 semester hours at the University will automatically be considered for the Dean's List at the end of each semester. A cumulative quality point ratio of 3.20 or better is required.

DEGREES

The Bachelor and Associate degrees will be conferred at Commencement when the student has met all the requirements of his program and has met the following University requirements:

1. Has earned a cumulative quality point ratio of at least 2.00.
2. Has been recommended by the faculty.
3. Has met all financial obligations.
4. Has completed the last 30 semester hours at University of New Haven.

HONORS

Honors may be conferred upon candidates for graduation who have completed at least 60 semester hours of work at the University of New Haven in their junior and senior years. The following standards shall be used:

BACHELOR DEGREES WITH HONORS

1. The Bachelor degree **Cum Laude** may be awarded to a student whose cumulative quality point ratio is at least 3.25 at the end of the first semester of his senior year and who continues to attain the same standard for the remainder of the year.

2. The Bachelor degree **Magna Cum Laude** may be awarded to a student whose cumulative quality point ratio is at least 3.50 at the end of the first semester of his senior year and who continues to attain the same standard for the remainder of the year, whose quality point ratio in all courses counting toward his major is at least 3.50, and who has completed all the suggested courses with his curriculum.

3. The Bachelor degree **Summa Cum Laude** may be awarded to a student whose cumulative quality point ratio is at least 3.70 at the end of the first semester of his senior year, who continues to attain the same standard for the remainder of the year, whose quality point ratio in all courses counting toward his major is at least 3.70, and who has completed all the suggested courses within his curriculum.

ADVANCED STUDY

Advanced study courses are offered for qualified students in the departments offering the degree of Bachelor of Science or Bachelor of Arts. These courses may include a thesis, tutorial work, or independent study which permits the students to work intensively in areas of special interest.

ASSOCIATE IN SCIENCE DEGREE WITH HONORS

A degree **With Honors** is awarded to students who have a quality point ratio of 3.25 for the semester hours specifically required for the degree program from which they are being graduated, and who have taken all the required work at this university.

Transfer students will be awarded honors on the same basis, with the provision, however, that their total average will be considered only when they have an honor average for studies completed at this university.

A degree **With High Honors** is awarded to students who have a quality point ratio of 3.50 based on the same considerations as noted above.

In determining eligibility for degrees with honor, credits earned by crediting examinations and electives in excess of those required will not be considered.

TRANSITIONAL STUDIES

Transitional Studies has been instituted to assist students with basic skill deficiencies in obtaining a university education. The curriculum and the methods of instruction have been designed in consideration of the motivational, economic, and social problems which have hampered the progress of these students, especially those from urban areas.

Full-time students take 12 hours of regular course work and 8 hours of intensive group tutoring—4 each in math and English. Matriculation from Transitional Studies into regular college programs is based on an evaluation of the student's ability to handle the normal course requirements. Students may complete the program in one or more semesters, depending on ability and achievement. Matriculating students may receive 12 credits which can be applied towards an Associate or Bachelor degree.

TRANSFERABILITY OF CREDIT

In accordance with the usual practice among institutions of higher learning, transfer of credit from this university to another institution will be determined by the other institution in terms of the achievement and promise of the individual seeking transfer. The institution to which transfer is being made will also evaluate specific courses in terms of their length and content in relation to its specific requirements. University of New Haven is an accredited institution and its credit will be given consideration by the major institutions of the country in terms of the conditions outlined above.

COURSE OVERLOAD RESTRICTION

A student may not register for a course load in excess of 18 semester house (19 s. h. for certain engineering programs) without prior written approval by his dean. The dean, at his discretion, may grant overload approval not exceeding one course if the student's Quality Point Ratio is 2.50.

ATTENDANCE REGULATIONS

Classes are operated on the policy that it is necessary for all students to attend all class meetings. If a class is missed, the benefits from participation in the class discussion and instruction are completely lost. No student, regardless of ability, can afford that loss.

Evening Credit Programs A student is allowed only two absences per semester for a 3-or-4 semester hour course. If the student is absent more than twice, permission to continue in the course must be obtained from the instructor.

Day Credit Programs Attendance regulations for daytime students are outlined in the **Student Handbook.**

COORDINATED COURSE OFFERINGS — UNIVERSITY OF NEW HAVEN AND QUINNIPIAC COLLEGE

In order to broaden the educational opportunities available to their students, the University of New Haven and Quinnipiac College have entered into a reciprocal agreement through which students formally enrolled in either institution may elect certain courses offered by the other college, subject to the approval of the respective deans.

Credit, grades, and quality points earned in courses covered by this agreement will be officially recorded at the University of New Haven.

The Director of Student Services of the University of New Haven should be consulted for additional information concerning these co-ordinated course offerings.

SUMMER SESSIONS

DAY AND EVENING CREDIT DIVISIONS

The University offers summer sessions with these primary functions:

1. To offer opportunity for summer study to those residents of the New Haven area who attend other schools during the regular school year. For financial reasons, most of these students find it desirable to live at home and work during the summer. The summer program of the University is offered in both the Day and Evening divisions. Reasons for summer study vary, but are generally confined to the following:
   a. To make up deficiences.
   b. To satisfy prerequisites for courses in the present institution.
   c. To acquire advanced standing in the parent school.

   In general, credits earned at the University of New Haven are acceptable to parent institutions. For assurance of the acceptance of credit by the parent school, written approval of that school is required. The University of New Haven is a member of the New England Association of College and Secondary Schools and the National Association of Summer Schools.
2. To provide opportunity for summer study to the students of the University. Reasons for summer study for this group of students may be described as follows:
   a. To lighten the study load during the regular school year, but still meet the yearly requirements of the program.
   b. To shorten the normal time required for a degree.
   c. To take preparatory work.
   d. To make up deficiencies caused by failure in certain courses.
   e. To take additional work beyond the degree and yet complete a program within the normal time.

The accomplishment of any one of the five objectives listed above will depend on the specific subjects offered during any summer session.

REGISTRATION

Registration For all new students a personal interview with a staff member of the University is necessary. Registration procedures will be explained at this time. For those new students who desire work for credit in other institutions, prior approval must be obtained from those institutions (see 1. above). This procedure should be followed each semester regardless of previous attendance.

TRANSFER OF CREDITS

Transferring of Credits Credits may be transferred from the University of New Haven, a fully accredited university, to any other college or university, merely by obtaining a letter of authorization from the school regularly attended.

TUITION, FEES AND EXPENSES

NEW AND RE-ENTERING STUDENTS

Full time students (12-18 semester hours or equivalent) entering the University of New Haven during the 1972-1973 academic year for the first time or re-entering with a break in their attendance will be charged $1,700.00 for the academic year 1972-1973.

Due to prevailing economic uncertainties influencing the expenses of all colleges and universities, public and private alike, it does not seem reasonable or dependable to estimate costs and tuition revenues beyond the current year. It is expected however, that the charge for the academic year 1973-1974 will approximate $1,800.00.

GUARANTEED TUITION CHARGES

This plan offered in previous catalogs provided for guaranteed tuition for the years 1972-1973 and 1973-1974 is available only to those students who were enrolled in 1971-1972 under it. The charges are as follows:

1972-1973	—	$1,635.00
1973-1974	—	1,800.00
1974-1975	—	To be announced.

These guaranteed charges are available only to those students who were enrolled in the University of New Haven in 1971-1972 without a previous break in attendance and provided that the students complete degree requirements in the normal sequence:

Freshmen	—	4 years
Sophomores	—	3 years
Juniors	—	2 years
Seniors	—	1 year

Any interruption in the time schedule, regardless of reason, will place the returning student in the schedule of rates published in the catalog of the year during which he returns.

DAY DIVISION FEES

Day Division, regular academic year 1972-1973

Application Fee — $ 15.00
Payable only once, at time of initial application.
Not refundable.

Acceptance Fee — 35.00
Payable by all new students (incoming freshmen, transfer, and former students) upon notification of acceptance. This is a one-time deposit. Deposits after June 1, 1972, are one-time fees that are not refundable.

	Guaranteed Tuition Plan		Regular Tuition Plan	
Tuition	Per semester	Per year	Per semester	Per year
1. Full time students (12-18 hours or equivalent) in day or evening sections*. *Students in engineering required to carry 19 semester hours will pay same tuition by submitting authorization from Dean of Engineering to Business Office.	$817.50	$1,635.00	$850.00	$1,700.00
2. Less than 12 credit hours in day division per credit hour $70.00				
3. Less than 12 credit hours in evening division per credit hour $39.00				
4. More than 18 credit hours or equivalent per credit hour—taken in day or evening division $39.00				
Student activity fee	20.00	40.00	20.00	40.00
Total standard tuition and fees for regular full time students for academic year 1972-1973	$837.50	$1,675.00	$870.00	$1,740.00

Note: The Student activity fee covers subscription to the University newspaper, admission to on-campus athletic events, use of the Student Center, and helps defray costs of student activities and facilities.

TUITION

Summer Terms and Evening Division

For information regarding both summer sessions and the Evening division request respective brochures.

OTHER CHARGES

Change of registration $ 5.00
Assessed for changing courses or sections after the completion of registration.

Late fee 5.00
Assessed for failure to complete registration and/or payments before due date. All students who have not completed tuition payment by the start of the semester will be assessed an additional late fee of $5.00 plus $1.00 for each additional day thereafter.

Laboratory fees—payable each semester by students registering for courses requiring the laboratory fee. See Course Description for specific amounts. Not refundable.

Make-up examination Assessed when a student is permitted to take an end-of-semester examination at a time other than the scheduled time, except for conflicts caused by the examination schedule.	5.00
Make-up test Assessed when a student is permitted to make up an announced test during the semester.	3.00
Auditors—The fee for a student auditor in any course or courses is the same as if the courses were taken for credit.	
Graduation fee Assessed regardless of participation in exercises; no reduction will be made for non-attendance. For graduation in June, fee is due before March 1 of year of graduation; for January commencement, due October 15 of prior calendar year.	35.00
Transcript of academic work—no charge for the first one; thereafter, per copy	1.00

RESIDENCE CHARGES

	Per semester	Per year
Residence room	$350.00	$700.00

Rooms are contracted for the entire academic year and the student is responsible for the room rent whether or not he occupies the room. The University assumes no responsibility for the loss or destruction of any clothing or personal belongings of the student. The Residence will be officially closed during the Thanksgiving, Christmas, and Spring vacation periods when classes are not in session.

Room Deposit Payable by all Residence students at the time of application.		$100.00
Linen	$ 20.00	$ 40.00*
Board		

MEALS

20 Meal Plan (6 days, 3 meals, Sunday, 2 meals)	$275.00	$550.00*
15 Meal Plan (5 days, 3 meals)	$250.00	$500.00*

* Residence and board charges are for the academic year September, 1972 - June, 1973 only. Rates are subject to change upon due notification.

PAYMENT OF BILLS

Tuition, fees, and other charges are payable when due. Payment made by check or money order should be made payable to University of New Haven.

As a convenience to those who desire to spread their payments out over a period of time, a deferred education payment plan is available to full-time students and to part-time students carrying six or more credits or the equivalent. Details of this plan are available at the Business Office.

FAILURE TO PAY

The University withholds the giving of grades, the issuance of transcripts, and the granting of honorable dismissal to any student whose account is in arrears.

WITHDRAWAL DAY DIVISION

From University—Students are required to discuss their intentions with a member of the Counseling Center before officially withdrawing from the University. Forms for withdrawal are available at the Counseling Center.

From a Program—Students considering a change in program should first discuss the matter with the department chairman of the proposed new program. If it is agreed that the change is advisable, written permission will be granted. Forms for making a change are provided by the Reception Office.

Course changes—Forms are available at the Scheduling Office.

WITHDRAWAL FROM THE UNIVERSITY AND REFUND OF TUITION

A. **Full-time day students**—Registration does not carry with it the right of an automatic refund of tuition in cases of withdrawal. No deduction is made for temporary absence from classes, nor is any refund made if a student is suspended or dismissed.

Note: Formal withdrawal requires that a student make an appointment with the Counseling Center in order to fill out and sign an official Total Withdrawal form that must be co-signed by a University Counselor.

1. Any student under the age of 21 must have the written consent of a parent or guardian with an indication to whom any refund, if applicable, is to be paid.
2. Tuition is refunded or canceled according to the scale below upon receipt of formal withdrawal request before the end of the fourth week of a semester.

1st Week	— 80%
2nd Week	— 60%
3rd Week	— 40%
4th Week	— 20%
After 4th Week	— 0%

A pro-rated credit toward the following semester or refund may be awarded, subject to the decision of the Committee on Withdrawals, in situations involving:

(a) death or protracted illness of a student
(b) involuntary induction into military service
(c) other clearly extenuating circumstances

All requests for refund must be made in writing and include necessary documentation. The University assumes no responsibility beyond the foregoing for withdrawal occasioned by the pressures of family life or occupation.

The foregoing policy is intended to protect the University, since the University plans its expenses and bases its budget upon full collection of tuition and fees from all registered students, and assumes the obligation of supplying instruction and other services throughout the year.

B. **Part-time students**—Tuition only is refunded or canceled by one of two methods upon receipt of formal withdrawal request before the end of the fourth week of a semester.

1. Percentage basis for any reason during the first four weeks of a semester:
   80% of semester tuition—1st week
   60% of semester tuition—2nd week
   40% of semester tuition—3rd week
   20% of semester tuition—4th week
   0% of semester tuition after 4th week

2. Pro-rata basis of tuition before end of fourth week involving:
   (a) death or protracted illness of student
   (b) involuntary induction into military service
   (c) transfer or change of work intiated by employer that precludes meeting class schedules

All requests for refund must be made in writing and include necessary documentation.
The University assumes no responsibility beyond the foregoing for withdrawal occasioned by the pressure of family life or occupation.

C. **Summer session students**—In cases of withdrawal from a course or courses within the first week of each term, a refund of 50% of tuition only is made. There is no refund of summer tuition after the first week.

The foregoing policy is intended to protect the University, since the University plans its expenses and bases its budget upon full collection of tuition and fees from all registered students, and assumes the obligation of supplying instruction and other services throughout the year.

Changes In Arrrangements

The Board of Governors of the University of New Haven reserves the right to make such changes in tuition, fees, and other costs which, in its judgment, are considered necessary and just. No changes in charges will be made retroactive.

SCHOOL OF ARTS AND SCIENCES

JOHN COLLINSON, DEAN

Bachelor of Arts Degree

MAJORS IN:

- AMERICAN STUDIES
- ART
- BIOLOGY
- CHEMISTRY — (3 options)
- ECONOMICS
- ENGLISH
- ENVIRONMENTAL STUDIES (4 options)
- HISTORY
- MATHEMATICS
- PHYSICS
- POLITICAL SCIENCE
- PSYCHOLOGY
- SOCIAL SERVICES
- SOCIOLOGY

Associate in Science Degree

MAJORS IN:

- GENERAL STUDIES
- COMMERCIAL AND ADVERTISING ART
- JOURNALISM
- BIOLOGY

ARTS AND SCIENCES

BACHELOR OF ARTS BACHELOR OF SCIENCE

The School of Arts and Sciences offers a four-year college curriculum leading to Bachelor of Arts and Bachelor of Science degrees. Core requirements for all Bachelor programs are listed below. The requirement for graduation is 120-126 semester hours.

Because some employers and some graduate schools in scientific and technical fields indicate a preference for the Bachelor of Science degree, this degree is offered in Chemistry and Biology. If the student wishes to obtain a Bachelor of Science in either major, he may do so by taking a heavier concentration in the sciences. Details of these programs are to be obtained from the department chairmen.

AMERICAN STUDIES

A Bachelor of Arts major in **American Studies** is offered jointly by the departments in Humanities and Social Sciences. This program consists of a series of interdepartmental seminars emphasizing various aspects of contemporary American civilization and culture and stresses independent reading and research by the student. For further information contact the chairman of an appropriate department.

APPLICATION TO THE PROGRAM

An applicant for admission to the Arts & Sciences Program must be a graduate of an approved secondary school or the equivalent. While no set program of high school subjects is prescribed, an applicant must meet the standard of the University in respect to the high school average and present 15 acceptable units of satisfactory work, including 9 or more units of college preparatory subjects. Satisfactory scores on College Entrance Examination Board (S.A.T.) or American College Testing Program tests (A.C.T.) are required.

MATRICULATION

Matriculation for Bachelor Degree Students who have completed at least two semesters or equivalent (30 academic credit hours) with a minimum quality point ratio of 2.00 may apply for matriculation for the Bachelor degree.

ADMISSION REQUIREMENTS

Admission will be limited to applicants who have given evidence of capacity and motivation adequate for upper division work as determined by the department chairman.

A cumulative quality point ratio of at least 2.00 is required in a Bachelor of Arts student's major field.

ART

Art Study of the vital arts provides opportunity for self-realization and gives the individual a perception of his relationship to society. The program is designed to develop sensitivity to visual materials and experiences and the psychic response to them by which the student

will be led to make his own expressive statement in a variety of media. Many career opportunities exist for those who are competent in the visual arts. Among these are openings for art directors in various fields of business and industry. The program also provides excellent preparation for further study in art education, graphic art, industrial design, architecture, city planning, cinema, television, and art history.

A minimum of 30-36 semester hours in art is required for the major. Flexibility of planning is provided, but it is suggested that the students adhere to the following basic outline of courses: ART 101-102 (Introduction to Studio Art), ART 201 (Drawing and Painting I), History of Art (six semester hours), Design (six semester hours) ART 302, (Advanced Drawing) or ART 313 (Photography), and ART 401-402 (Studio Seminar). Art majors are encouraged to elect courses in art over and above the minimum requirements.

Biology The program prepares the student for medical, dental, veterinary, or other professional training, as well as for a graduate program in biology and in allied health fields. Students in other disciplines, allied or not related, frequently choose biology as a minor area of concentration. This is particularly true for those majoring in the social and behavioral sciences.

For those not seeking specific professional specialization, employment opportunities for biologists are found in industry, federal, state, and municipal organizations, hospitals, research and technical laboratories, as well as in teaching. New employment areas are appearing where a knowledge of biology and a second discipline are required. Examples of these are Bioengineering, Psychobiology, Environmental Science, Pharmaceutical and Biological Sales, Management in Biological Business, Oceanography, Forensic Science, and many more related to biology, such as Pharmacology and Toxicology.

Prospective biology majors or those wishing to follow a Pre-Medical, Pre-Dental, Pre-Veterinary, or allied Health Program should consult with a member of the Biology Department before or soon after registration for their first term.

Prospective biology majors should consult with the department chairman during their first term.

Biology majors are required to take SC 251-252, CH 105-106, M 115-116 or M 117-118, SC 201, SC 301, PH 103-104, SC 308, SC 307 or SC 309, SC 361-362, SC 491-492, and five elective courses. The language choice in order of preference is German, French, Italian, or Spanish.

CHEMISTRY

Chemistry This major is offered for those students who wish to avail themselves of the many career opportunities in the general field of chemistry and also for those who wish to go on to graduate work with a broad liberal education and a thorough grounding in a scientific discipline.

Career opportunities exist in the following areas: Management, technical purchasing or sales, research, product control, production, and product development in the chemical, pharmaceutical, or related industries; analysis and research in forensic science, medicine, oceanography, and the environmental sciences; sales and product development in the laboratory equipment field; and teaching.

In addition to the regular Chemistry programs, a student may elect options in the following areas: Biology, Business, Engineering, Environmental Studies, Forensic Science, or Pre-Medical. Courses in each option are taken instead of the normal electives. For details of the options, the department chairman should be consulted.

A major in Chemistry must complete the following courses: Six to twelve semester hours of German, Russian, French, or the equivalent, PH 108, 209, 210; CH 105, 106, 211, 301, 302, 341, 401, 431, 432, 451, 452 or CH 400 elective. In addition he is required to take Mathematics through M 203.

ECONOMICS

Economics An economics major within a broad program of liberal studies provides a preparation for higher positions in business and industry today. It is also excellent preparation for graduate work in business administration or for graduate study in economics itself.

Economics majors will be required to take, in addition to EC 133-134 (Principles of Economics I and II), a total of 27 semester hours, including EC 336 (Money and Banking), EC 320 (Mathematical Methods in Economics), EC 340 (Microeconomic Analysis), EC 445 (Macroeconomic Analysis), and EC 450 (Thesis). Beyond these requirements, a flexible program may be devised for each major to fit the student's needs and interests. With the approval of the chairman or some other member of the department, a student may elect suitable courses in other departments to fulfill the semester hour requirement.

Economics majors are required to take A 111 (Accounting), M 127 (Finite Mathematics), and BA 216 (Statistics).

ENGLISH

English The study of English as one of the humanistic disciplines offers a solid foundation for graduate work and a liberal education, developing abilities to think critically and write effectively.

The course requirement for English majors is E 113, 206, 211-212, 213-214, and 21 additional semester hours in course work beyond the sophomore level. While no specific courses are required, students will balance their work between period courses and other offerings of the English department. Their major programs must be approved by an adviser who is a member of the English department.

Prerequisites for courses numbered 300 should include E 113, E 206 and E 211-212. Students not majoring in English who wish to take courses numbered above 300 should have permission of advisers.

English majors are responsible for meeting the foreign language requirement—the 101-102 and 201-202 courses in a language, or competence in the language equivalent to the second semester of the intermediate level.

ENVIRONMENTAL STUDIES

Environmental Studies This new Bachelor program offers the student four options in areas of concentration beyond the common group of core courses. These four specialties are: Water Quality Control, Air Quality Control, Community Health, and Community Ecology. The first three are oriented towards the biological and physical sciences, while the fourth is concentrated heavily in the behavioral sciences. Actually this latter specialty is an interdisciplinary program in the behavioral, biological, and physical sciences. There are increasing job opportunities for those trained in the general area of Environmental Studies as teachers, technicians, administrators, field workers, and as assistants to administrators in business, industry, and government.

A major in one of these areas of Environmental Studies will provide the necessary training to enable the student to continue his education and training in this area by being qualified to enter a professional school related to a specific environmental discipline, such as a school of Public Health or one of Urban Ecology.

Those students interested in one of the optional programs in Environmental Studies should consult with the chairman of the Biology Department.

HISTORY

History The study of history provides excellent preparation for those seeking professional careers in public service and general administration. This major also builds a good foundation for graduate study in various areas, such as law and teaching.

All History majors will be required to take in addition to HS 111-112 and HS 211-212 the following courses: HS 321 (History of Ancient Greece and Rome) or HS 317 (Renaissance and Reformation), and a course in Far Eastern History. HS 416 (Senior Seminar) is required of all majors. The major program consists of 36 hours to be determined with the advisor.

MATHEMATICS

Mathematics The program of study in mathematics can provide a student with a basis for a career in industry or teaching, as well as for further studies in graduate school. Because mathematics is fundamental to so many fields, a degree in mathematics gives one an opportunity to diversify into areas such as engineering, physics, statistics, computer science, and business administration.

A major in mathematics must complete the following courses: M 117, M 118, M 121, M 203, M 204, M 231, M 321, M 325. In addition the major must complete four 300 level or 400 level mathematics courses approved by the mathematics department and 12 semester hours of natural science or engineering selected under advisement.

PHYSICS

Physics A major in physics will provide students with basic scientific knowledge for either a technical career or graduate school in any of the sciences and engineering.

A Physics major must complete the following courses: PH 108, 209, 210, 211, 301, 351, 352, 371, 372, 373, 404, and 12 semester hours of Physics electives. In addition he must complete M 117, 118, 203, 204, 231, 301; CH 105 and 106.

POLITICAL SCIENCE

Political Science A Political Science major provides the student with an appropriate foundation for the study of politics or international relations at the graduate level, as well as the study of law, while at the same time it may provide the basis for a career in the electoral process, teaching, communications, the civil service, or the foreign service of the United States. All Political Science majors or potential Political Science majors should discuss job electives and goals with the department chairman at an early stage in order to select relevant courses in a total program.

A Political Science major is required to take a total of 30 semester hours in the Political Science Department, which must include PS 120, 121, 122, 401, 402, and 416. All pre-law Political Science majors should take Introductory Accounting (A 111-112) as an elective and all others should take Statistics for Behavioral Science (Psychology 301) or Statistics (Business Administration 216) as an elective to complete the major.

PSYCHOLOGY

Psychology Graduate study leading to the Master's degree is minimal for professional status in Psychology. A solid foundation for such graduate work is defined by a broadly-based liberal education.

Major requirements, under advisement, include P 111, P 301, P 321, P 350, and 21 hours of advanced Psychology courses, SC 121-122, SO 113, PHL 111 or 124, and one college-level mathematics course.

SOCIOLOGY

Sociology Students who wish to understand the intellectual tradition that has focused on the description and explanation of human society will be interested in a sociology major. It requires a humanistic orientation while regarding empirical research as the major means of extending knowledge about man. A sociology major may continue his work in graduate school or may find employment in such fields as government service, personnel work, advertising, and industry.

Major requirements are SO 113, 114, 221, 413, 440 or 450, P 301 or BA 216, and 15 additional semester hours in sociology at least 9 of which must be taken from the 300 level or above. No more than 3 semester hours towards a major will be accepted from social work courses.

SOCIAL WELFARE

Social Welfare Students who wish to go into Social Work and related areas may take a concentration in Social Welfare. The program trains students to work with people, both individually and in groups, perceiving problem situations and dealing with these in a professional manner. Graduates must have the knowledge, attitudes, and skills common to the profession at the baccalaureate level. They must also be aware of the overall problems confronting society today and the position social work takes in response to these problems.

There are employment opportunities in federal, state, and private organizations, or the student may wish to continue his education in a graduate school of social work.

Major requirements are: Math elective, SO 113, 114, P 111, 301, SW 220, 350-351, 340, 415-416, 401-402, 450, 475.

TEACHER EDUCATION

Teacher Education The University of New Haven is presently preparing a proposal seeking approval from the State of Connecticut Commission for Higher Education and the Connecticut State Department of Education for an accredited Teacher Education Program. Selected teaching areas will be offered for undergraduate students who can qualify for Teacher Certification and the State of Connecticut Provisional Teaching Certificate. Students interested in a teaching career should meet with the Director, Teacher Education Program, as early as possible in their college career.

CORE REQUIREMENTS FOR BACHELOR PROGRAMS

These course requirements and those prescribed by the students' major department must be met by all Arts and Science students. Only courses offered by Arts and Science departments can be used to satisfy the core requirements.

Bachelor of Arts

18 s.h.	**English and Humanities**
3	English Composition
3	English Composition and Literature
6	*Fine Arts
6	Literature
24 s.h.	**Social Sciences**
3	Economics
6	Western Civilization I & II
3	Philosophy
3	Psychology
3	Sociology
3	Political Science
3	A course chosen from any Social Science department
11-12 s.h.	**Science and Mathematics**
	Physics
	Chemistry
	Science
	Biology
	Mathematics
n.c.	**Physical Education—2 sem.**
Total 60 s.h.	

* Fine Arts includes Art, Music, and Theater.

** Students must elect at lest one semester ot a laboratory science.

TYPICAL BACHELOR PROGRAM — FRESHMAN YEAR

	Fall			Spring	
E 113	English Composition	3	E 206	English Comp. & Lit.	3
HS 111	Western Civilization I	3	HS 112	Western Civilization II	3
	Foreign Language	3		Foreign Language	3
	Mathematics or Science	3		Mathematics or Science	3
	*Elective	3		*Elective	3
PE 111	Physical Education I	0	PE 112	Physical Education II	0
		15			15

* Choices should be determined by the requirements of the student's major.

Biology SC 251-252, CH 105-106, M 115-116 or M 117-118. Omit HS 111-112 in freshman year.

Economics and History PS 121, SO 113, P 111.

Chemistry M 117, 118, CH 105, 106, German or Russian.

Mathematics M 117, 118, 121, 122, German, French, or Russian.

Physics CH 105, 106, M 117, 118, PH 108, 209, German, French, or Russian. Omit HS 111-112 in freshman year.

A student will be assigned an adviser in his major area before pre-registration for the first semester of the sophomore year.

ARTS AND SCIENCES

The Arts & Sciences Program offers a two-year college curriculum leading to an Associate in Science degree. Although primarily a terminal program, most courses will transfer upon completion, should the student wish to continue for a bachelor degree.

ASSOCIATE IN SCIENCE DEGREE

This program offers a choice of majors to give the students a certain amount of concentration in fields in which it is felt there will be employment opportunities throughout the nation for both men and women. The four majors offered are Biology, Commercial and Advertising Art, General Studies, and Journalism.

BIOLOGY

Biology Opportunities for a student majoring in biology are found in industrial, academic, and governmental organizations, as well as in research and medical institutions and laboratories. Examples of these would be positions as environmental health and sanitation specialists, medical technologists, medical or scientific secretaries or librarians, cytologists, nurses or nurses' aides, as well as laboratory technicians and researchers in agricultural, biological, and medical laboratories. The greatest opportunities lie in the combined fields of biology and other disciplines such as, chemistry, sociology, physics, psychology, engineering, mathematics, and business. The most popular of these is the pre-medical or pre-dental program. An A.S. in Biology will allow a student to transfer to a School of Pharmacy with two years of credit toward that degree.

COMMERCIAL AND ADVERTISING ART

Commercial and Advertising Art This major is offered for both women and men who wish to obtain employment in a vast and challenging field. All graphic media, such as newspapers, magazines, brochures, company publications, and indoor and outdoor advertising displays will be covered. In addition, the courses will help develop the artistic talent of those students who are interested in art training to be used in other professions.

GENERAL STUDIES

General Studies This major is offered for those students who wish a college degree of a general nature and for those students who have not yet decided upon a field of specialization but who, in the meantime, want to start college work.

JOURNALISM

Journalism This major is offered for both women and men who wish to obtain employment in the closely related and ever expanding fields of journalism and public relations. Students taking this major will have an opportunity to work on the staff of the University's student publications.

TWO YEAR ASSOCIATE IN SCIENCE PROGRAM

GENERAL STUDIES

General Studies Major

FIRST YEAR

	Fall	Sem. Hrs.		Spring	Sem. Hrs.
E 113	English Composition	3	E 206	Eng. Comp. & Lit.	3
P 111	Psychology	3	HS 111	Western Civ. I	3
PE 111	Physical Education 1	0	SO 113	Sociology	3
PS 121	American Government	3		Foreign Language or Elective	3
	Foreign Language or Elective	3	PE 112	Physical Education II	0
	*Elective ...	3		*Elective	3
		15			15

SECOND YEAR

	Foreign Language or Elective	3	HS 112	Western Civ. II	3
EC 133	Prin. of Economics I	3		Foreign Language or Elective	3
	Literature Elective	3	EC 134	Prin. of Economics II	3
	Science, Math, or Elective	3		Science, Math, or Elective	3
	*Elective	3		*Elective	3
		15			15

* Students who expect to transfer to a four-year program leading to a Bachelor degree should complete 12 hours of science or mathematics.

The student is expected to carry 15 credit hours per semester. A total of 60 semester hours is required for the degree.

COMMERCIAL AND ADVERTISING ART

Commercial and Advertising Art Major

FIRST YEAR

	Fall	Sem. Hrs.		Spring	Sem. Hrs.
ART 101	Introduction to Studio Art I	3	ART 102	Introduction to Studio Art II	3
ART 211	Design I	3	ART 212	Design II	3
E 113	English Composition	3	E 206	Eng. Comp. & Literature	3
PE 111	Physical Education I	0	P 111	Psychology	3
PS 121	American Government	3	PE 112	Physical Education II	0
	Elective	3		Elective	3
		15			15

SECOND YEAR

ART 211	Lettering	3	ART 122	Layout & Print. Tech.	3
BA 107	Advertising & Promotion	3	ART 131	History of Art or Elective	3
EC 133	Prin. of Economics I	3	EC 134	Prin. of Economics II	3
	Literature Elective	3		Literature Elective	3
	Science of Math. ...	3		Science or Math.	3
		15			15

The student is expected to carry 15 credit hours per semester. A total of 60 semester hours is required for the degree.

TWO YEAR ASSOCIATE IN SCIENCE PROGRAM

JOURNALISM

Journalism Major

FIRST YEAR

	Fall	Sem. Hrs.		Spring	Sem. Hrs.
E 113	English Composition	3	ART 122	Layout & Print. Tech.	3
J 101	Journalism I	3	E 206	Eng. Comp. & Lit.	3
PE 111	Physical Education I	0	J 102	Journalism II	3
PS 121	American Government	3	P 111	Psychology	3
HS 111	Western Civ. I	3	PE 112	Physical Education II	0
	Elective	3	HS 112	Western Civ. II	3
		15			15

SECOND YEAR

EC 133	Prin. of Economics I	3	EC 134	Prin. of Economics II	3
J 201	News Writing & Reporting	3	J 301	Advanced Journalism & Feature Writing	3
SO 113	Sociology	3		Literature Elective	3
	Literature Elective	3		Science or Math.	3
	Science or Math.	3		Elective	3
		15			15

The student is expected to carry 15 credit hours per semester. A total of 60 semester hours is required for the degree. The student majoring in Journalism should be able to type.

BIOLOGY

Biology Major

FIRST YEAR

	Fall	Sem. Hrs.	Lab. Hrs.	Class Hrs.		Spring	Sem. Hrs.	Lab. Hrs.	Class Hrs.
E 113	Eng. Comp.	3	0	3	E 206	Eng. Comp. & Lit.	3	0	3
SC 121	Biology I	3	0	3	SC 122	Biology II	3	0	3
SC 131	Biology Lab. I	1	3	0	SC 132	Biol. Lab. II	1	0	0
CH 105	Gen. Chem. I w/Lab.	4	3	3	CH 106	Gen. Chem. I w/Lab.	4	3	3
M 115	Math. Analysis I or				M 116	Math. Analysis II or			
M 117	Calculus I	3	0	3	M 118	Calculus II	3	0	3
	Foreign Language or Non-Science Elective	3	0	3		Foreign Language or Non-Science Elective	3	0	3
PE 111	Physical Ed. I	0	0	2	P 112	Physical Ed. II	0	0	2
		17	6	17			17	6	17

SECOND YEAR

E 201	World Lit. I	3	0	3	E 202	World Lit. II	3	0	3
SC 251	Zoology w/Lab.	4	3	3	SC 252	Botany w/Lab.	4	3	3
SC 361	Biochemistry I w/Lab.	4	3	3	SC 362	Biochemistry II w/Lab.	4	3	3
SC 201	Genetics	3	0	3	P 111	Psychology or			
	*Restricted Elective or Foreign Language	3	0	3		*Restricted Elective Elective or Foreign Language	3	0	3
		17	6	15			17	6	15

* Restricted electives are chosen in consultation with the department chairman.

SCHOOL OF BUSINESS ADMINISTRATION

WARREN J. SMITH, DEAN

Bachelor of Science Degree

MAJORS IN:

- ACCOUNTING
- ECONOMICS
- FINANCE
- GENERAL MANAGEMENT
- HOTEL ADMINISTRATION
- OPERATIONS MANAGEMENT
  INCLUDING COMPUTER SCIENCE
- MARKETING
- PUBLIC ADMINISTRATION
- CRIMINAL JUSTICE WITH PROGRAMS IN
  LAW ENFORCEMENT ADMINISTRATION
  FORENSIC SCIENCE
  CORRECTIONAL ADMINISTRATION

Associate in Science Degree

MAJORS IN:

- BUSINESS ADMINISTRATION
- CORRECTIONAL ADMINISTRATION
- LAW ENFORCEMENT

BUSINESS ADMINISTRATION

The School of Business Administration provides programs to prepare students for (1) several areas of business and economics, (2) the broad field of criminal justice, and (3) public administration. The courses of study combine strong professional programs with comprehensive background in the liberal arts.

BUSINESS AND ECONOMICS

The School of Business Administration considers it axiomatic that, over the long run, a graduate is better prepared for the business world when his collegiate business background has been comprehensive rather than highly specialized. Consequently, only a limited amount of specialization is intended in the various departmental majors.

GENERAL MANAGEMENT

General Management—is the field generally chosen by those students who do not have a particularized objective.

ACCOUNTING

Accounting—is selected by those who wish to make this their career, including possibly ultimate attainment of the Certified Public Accountant license. Accounting has long been recognized as a preferred route to management responsibilities in many fields of business.

ECONOMICS

Economics—is a broad field in which specialists are called for by industry and government particularly to staff various types of research activities. This major is also one that would be considered by the student contemplating future graduate work or attendance at law school.

FINANCE

Finance—is one of the business disciplines that has extensive application to businesses generally.

HOTEL ADMINISTRATION

Hotel Administration—the School of Business offers a program leading to the Bachelor of Science degree in hotel administration. Students in this program follow the core curriculum in the School of Business during the first two years. In the last two years, students majoring in hotel administration take a wide range of advanced courses dealing with all aspects of hotel and restaurant administration and management. A detailed statement outlining the program and the requirements for this degree may be obtained through the office of the Dean, School of Business.

MARKETING

Marketing—is a widely recognized phase of business that presents unmatched opportunities to the qualified graduate, depending on whether his interests are in the selling, managing, or analytical phases.

OPERATIONS MANAGEMENT

Operations Management—is a growing profession. Its practices make increased use of quantitative analysis in the scientific management of business. Students with specific interest in data processing usually select this field.

PUBLIC ADMINISTRATION

Public Administration The Public Administration program is designed to prepare the student for careers in public affairs (government service, politics), governmental research, graduate school, or to give the student an insight, generally, into the various governmental organizations, functions, and methodology which are used to both determine and provide the services to the people.

On the premise that the basic skills required in managerial positions in public service have much in common with those of the manager in private industry, the student follows much the same program as other business students during the first two years.

For his junior and senior years the student majoring in Public Administration will arrange his program under the guidance of his Departmental Chairman, so as to meet his defined objectives. A wide selection of courses is available in the School of Business Administration and the School of Arts and Sciences.

CRIMINAL JUSTICE

Criminal Justice Four-year bachelor degree programs in criminal justice are offered. They are planned for high school graduates interested in any of the many careers in the administration and operation of criminal justice agencies on the federal, state, and local levels of government. Three programs are offered: Law Enforcement Administration, Forensic Science, and Correctional Administration.

LAW ENFORCEMENT ADMINISTRATION

Law Enforcement Administration This program prepares students for administrative careers with federal, state, and local law enforcement agencies or public and private security forces. Law enforcement administration is concerned with the activities and behavior of people in terms of maintaining law and order, providing needed services, and protecting life and property. The program provides basic studies in the liberal arts and public administration as well as courses pertaining to law enforcement administration and criminal justice.

FORENSIC SCIENCE

Forensic Science This program prepares students for careers as forensic scientists, criminalists, or evidence technicians in the field of criminal investigation and identification. The program includes basic studies in the natural sciences, liberal arts, and public administration as well as courses in forensic science and criminal justice.

CORRECTIONAL ADMINISTRATION

Correctional Administration This program prepares students for administrative careers with federal, state, local, and private correctional agencies. Correctional administration is concerned with the institutional and noninstitutional treatment of offenders. The program provides basic studies in the liberal arts and public administration as well as courses pertaining to correctional administration and criminal justice.

BUSINESS ADMINISTRATION

ADMISSION

Applicants should be graduates of an approved secondary school with an academic record deemed creditable by this university. A minimum of 15 acceptable units of secondary work, preferably in college preparatory subjects, with 4 units of English, is expected. Satisfactory scores on College Entrance Examination Board Tests or American College Testing Program Tests are required. Non-college credit courses are available to remedy deficiencies.

College transfer applicants will have their official academic transcripts and records evaluated on the general basis that work at an accredited two or four year college or a "C" or better quality will be accepted when a comparable course is offered at this university. Transfer credit is not confirmed until the student has completed succesfully one semester at this university. Transfer credit from a two year institution will not be allowed in excess of one half of the semester hours required for graduation here.

Applicants from the Armed Services and other mature individuals are invited to inquire about the possibility of crediting examinations in lieu of certain course work.

PROGRAMS

The typical degree programs in the various majors follow. If a student has special interests not provided for by these programs, an endeavor will be made to prepare a specific program for him (e.g. combined programs in Business and Chemistry).

The programs provided in the School of Business are divided into three general categories: (1) the business majors which are presented next below, (2) the programs in law enforcement starting at page 54, and (3) the program in public administration on page 57.

BUSINESS MAJORS

All business students take similar core courses in business, the allied social sciences, and certain other liberal arts subjects. Then several courses are taken in the major business field selected by the student. The program is rounded out with electives.

A student working for an Associate in Science in Business Administration diploma is required to complete the 60 semester hours of prescribed courses of the first two years with an accumulative quality point average of 2.0.

BUSINESS ADMINISTRATION

CORE COURSES

FIRST YEAR

	Fall	Sem. Hrs.		Spring	Sem. Hrs.
E 113	English Composition	3	E 206	Composition & Literature	3
HS 112	Western Civilization II	3	HS 114	Economic History of the Western World	3
BA 101	Business Law	3			
BA 118	Business Mathematics I	3 (a)(b)	BA 128	Quantitative Techniques	3
	Sociology or Psychology or Political Science	3	BA 105	Marketing	3
			IE 105	Technical Data Processing	3
PE 111	Physical Education	(0)	PE 112	Physical Education	(0)
	Total	15		Total	15

SECOND YEAR

A 111	Introductory Accounting	3	A 112	Introductory Accounting	3
EC 133	Principles of Economics	3	EC 134	Principles of Economics	3
	Literature or Philosophy or Fine Arts	3 (c)(d)		Literature or Philosophy or Fine Arts	3
BA 216	Statistics	3	BA 125	Management & Organizations	3
	Science	3		Science	3
	Total	15		Total	15

Notes: (a) Subject to placement examination by the School of Business.

(b) M 115 Mathematical Analysis I and M 116 Mathematical Analysis II may be substituted for the BA 118 and BA 128 sequence. Operations Management, Economics, and Finance majors are advised to take the M 115, M 116 sequence.

(c) Operations Management majors who do not take the M 115-M 116 sequence should defer Literature, Philosophy, or Fine Arts elective until the first semester of the junior year, and take instead BA 250 Quantitative Analysis.

(d) Accounting majors will defer these subjects and take instead A 221-222 Intermediate Accounting.

Before the end of his sophomore year a student will select a business major in consultation with the appropriate chairman or other designated adviser. His degree program for his third and fourth years will be prepared in consultation with his adviser. This will involve the selection of electives in addition to the required courses. Elective means all courses offered by the University.

Courses offered outside of the School of Business Administration or the Industrial Engineering Department of the School of Engineering shall comprise not less than 50 semester hours of all work taken toward graduation. Representative programs follow. A minimum of 120 semester hours is required for graduation.

BUSINESS ADMINISTRATION

GENERAL MANAGEMENT

General Management

THIRD YEAR

	Fall	Sem. Hrs.		Spring	Sem. Hrs.
BA 312	International Business	3	BA 227	Risk and Insurance	3
BA 113	Finance	3		Business Electives	6
	Sociology or Psychology or Political Science	3		Electives	6
	Electives	6		Total	15
	Total	15			

FOURTH YEAR

BA 231	Industrial Relations	3	BA 229	Financial Management	3
BA 510	Managerial Economics	3	BA 512	Business Seminar	3
	Electives	9		Electives	6
				Business Elective	3
	Total	15		Total	15

ACCOUNTING

Accounting

THIRD YEAR

	Fall	Sem. Hrs.		Spring	Sem. Hrs.
A 223	Cost Accounting I	3	A 224	Cost Accounting II	3
A 331	Advanced Accounting I	3	A 332	Advanced Accounting II	3
E 201	World Literature	3		Sociology or Psychology or Political Science	3
	Electives	6		Electives	6
	Total	15		Total	15

FOURTH YEAR

A 335	Income Tax Procedures I	3	A 336	Income Tax Procedures II	3
A 333	Auditing I	3	A 334	Auditing II	3
BA 510	Managerial Economics	3	BA 512	Business Seminar	3
	Electives	6		Electives	6
	Total	15		Total	15

ECONOMICS

Economics

THIRD YEAR

	Fall	Sem. Hrs.		Spring	Sem. Hrs.
EC 336	Money and Banking	3	EC 340	Microeconomic Analysis	3
EC 332	Economic Thought	3		Economics Elective	3
	Economics Elective	3		Sociology or Psychology or Political Science	3
	Electives	6		Electives	6
	Total	15		Total	15

FOURTH YEAR

EC 445	Macroeconomic Analysis	3	BA 512	Business Seminar	3
	Economics Elective	3		Economics Electives	6
	Electives	9		Electives	6
	Total	15		Total	15

BUSINESS ADMINISTRATION

MARKETING

Marketing

THIRD YEAR

	Fall	Sem. Hrs.		Spring	Sem. Hrs.
BA 107	Advertising & Promotion	3	BA 342	Marketing Research	3
BA 301	Retailing	3	BA 302	Industrial Marketing	3
BA 231	Industrial Relations	3		Sociology or Psychology or Political Science	3
	Electives	6		Electives	6
	Total	15		Total	15

FOURTH YEAR

BA 315	Marketing Management	3	BA 316	Sales Management	3
BA 510	Managerial Economics	3	BA 512	Business Seminar	3
BA 312	International Business	3		Electives	9
	Electives	6			
	Total	15		Total	15

OPERATIONS MANAGEMENT

Operations Management

THIRD YEAR

	Fall	Sem. Hrs.		Spring	Sem. Hrs.
IE 233	Cost Control	3	IE 502	Operations Research	3
BA 231	Industrial Relations	3		Business Elective	3
	Business Elective	3		Sociology or Psychology or Political Science	3
	Electives	6		Electives	6
	Total	15		Total	15

FOURTH YEAR

IE 507	Systems Analysis	3	IE 234	Production Control	3
BA 510	Managerial Economics	3	BA 512	Seminar	3
	Business Elective	3		Electives	9
	Electives	6			
	Total	15		Total	15

FINANCE

Finance

THIRD YEAR

	Fall	Sem. Hrs.		Spring	Sem. Hrs.
EC 336	Money and Banking	3	BA 230	Investments	3
BA 231	Industrial Relations	3		Business Elective	3
BA 113	Finance	3		Sociology or Psychology or Political Science	3
	Electives	6		Electives	6
	Total	15		Total	15

FOURTH YEAR

EC 314	Public Finance	3	BA 229	Financial Management	3
BA 510	Managerial Economics	3	BA 512	Business Seminar	3
A 335	Income Tax Procedures I	3	A 336	Income Tax Procedures II	3
	Electives	6		Electives	6
	Total	15		Total	15

BUSINESS ADMINISTRATION
CRIMINAL JUSTICE

LAW ENFORCEMENT ADMINISTRATION MAJOR

Criminal Justice —
Law Enforcement Administration Major

FIRST YEAR

Fall		Sem. Hrs.	Spring		Sem. Hrs.
CJ 103	Police Org. and Admin. I	3	CJ 104	Police Org. and Admin. II	3
E 113	English Composition	3	E 206	English Comp. and Lit.	3
M 127	Finite Math	3	BA 128	Quantitative Tech. Mgt.	3
P 111	Psychology	3	SO 113	Sociology	3
PS 121	American Government	3	PS 122	State and Local Government	3
PE 111	Physical Education I	0	PE 112	Physical Education II	0
	Total	15		Total	15

SECOND YEAR

CJ 106	Police Supervision	3	CJ 221	Juvenile Delinquency	3
CJ 201	Principles of Criminal Invest.	3	CJ 215	Introd. to Forensic Science	3
CJ 217	American Legal System I	3	CJ 218	American Legal System II	3
A 111	Introd. to Accounting I	3	A 112	Introd. to Accounting II	3
SC 121	Biology I	3	SC 122	Biology II	3
SC 131	Biology Lab. I	1	SC 132	Biology Lab. II	1
	Total	16		Total	16

THIRD YEAR

CJ 311	Criminology	3	CJ 401	Police Problems Seminar	3
PS 302	Constitutional Law	3	PA 390	Administrative Law	3
EC 133	Economics I	3	EC 314	Public Finance	3
PA 301	Principles of Public Admin.	3	P 336	Abnormal Psychology	3
	Elective	3		Elective	3
	Total	15		Total	15

FOURTH YEAR

CJ 402	Police-Community Relations	3	CJ 404	Criminal Law	3
CJ 403	Seminar in Scientific Crime Detection	3	CJ 501	Internship or Elective	3
IE 105	Tech. Data Processing	3	IE 507	Systems Aanalysis	3
	Elective	3		Elective	3
	Elective	3		Elective	3
	Total	15		Total	15

TOTAL: 122 Semester Hours

Criminal Justice — Forensic Science Major

FIRST YEAR

	Fall	Sem. Hrs.		Spring	Sem. Hrs.
E 113	English Composition	3	E 206	English Comp. & Lit.	3
CJ 103	Police Org. & Admin.	3	CJ 104	Police Org. & Admin. II	3
SC 121	Biology I	3	SC 122	Biology II	3
SC 131	Biology Lab. I	1	SC 132	Biology Lab. II	1
	Elective	3		Elective	3
PE 111	Physical Education I	0	PE 112	Physical Education II	0
CH 105	General Chemistry I	3	CH 106	General Chemistry II	3
	Chemistry Lab. I	1		Chemistry Lab. II	1
	Total	17		Total	17

SECOND YEAR

PH 103	General Physics I	3	PH 104	General Physics II	3
M 115	Math. Analysis I	3	M 116	Math. Analysis II	3
P 111	Psychology	3	SO 113	Sociology	3
CJ 217	Amer. Legal Sys. I	3	CJ 218	Ameri. Legal Sys. II	3
CJ 201	Princ. of Invest.	3	CJ 215	Intro. Forensic Sc.	3
	Total	15		Total	15

THIRD YEAR

CJ 303	Forensic Sci. Lab. I	3	CJ 304	Forensic Sci. Lab. II	3
CJ 221	Juvenile Delinquency	3	CJ 311	Criminology	3
CH 211	Quant. Analysis w/lab.	4	CH 341	Instrumental Methods Analysis w/lab.	4
	Elective	3		Elective	3
	Elective	3		Elective	3
	Total	16		Total	16

FOURTH YEAR

SC 419	Pharmacology w/lab.	4	CJ 305	Interviewing & Interrogation	3
CJ 403	Seminar in Scientific Crime Detection	3	CJ 401	Police Prob. Seminar	3
			CJ 306	Questioned Document Examination	3
SC 421	Toxicology w/lab.	4			
	Elective	3	CJ 501	Internship or Elective	3
				Elective	3
	Total	14		Total	15

TOTAL: 125 Semester Hours

BUSINESS ADMINISTRATION

CRIMINAL JUSTICE FORENSIC SCIENCE MAJOR

Criminal Justice — Correctional Administration Major

FIRST YEAR

	Fall	Sem. Hrs.		Spring	Sem. Hrs.
CJ 107	Correctional Org. & Adm. I	3	CJ 108	Correctional Org. & Adm. II	3
E 113	English Composition	3	E 206	English Composition & Lit.	3
M 127	Finite Math.	3	BA 128	Quantitative Tech. Mgt.	3
P 111	Psychology	3	SO 113	Sociology	3
PS 121	American Government	3	PS 122	State & Local Government	3
PE 111	Physical Education	0	PE 112	Physical Education	0
	Total	15		Total	15

SECOND YEAR

CJ 217	American Legal Sys. I	3	CJ 218	American Legal Sys. II	3
CJ 311	Criminology	3	CJ 221	Juvenile Delinquency	3
A 111	Accounting I	3	A 112	Accounting II	3
SC 121	Biology I	3	SC 122	Biology II	3
SC 131	Biology Lab. I	1	SC 132	Biology Lab. II	1
SO 114	Problems in Sociology	3	P 321	Social Psychology	3
	Total	16		Total	16

THIRD YEAR

CJ 307	Rehabilitation Theory and Practice	3	CJ 308	Correctional Counseling	3
			P 336	Abnormal Psychology	3
	Elective	3	EC 314	Public Finance	3
EC 133	Economics I	3	PA 390	Administrative Law	3
PA 301	Principles of Public Admin.	3		Elective	3
	Elective	3		Total	15
	Total	15			

FOURTH YEAR

	Elective	3	CJ 404	Criminal Law	3
PS 302	Constitutional Law	3	CJ 501	Internship or Elective	3
IE 105	Tech. Data Processing	3	IE 507	Systems Analysis	3
	Elective	3		Elective	3
	Elective	3		Elective	3
	Total	15		Total	15

TOTAL: 122 Semester Hours

* Day courses offered by the Department of Criminal Justice on the main campus in West Haven meet either on Tuesday and Thursday or Monday, Wednesday, and Friday. Evening courses offered on the main campus meet one evening each week from 7:00 to 9:45 p.m. Extension courses conducted in New Britain, Waterbury, and New London generally meet one evening each week from 7:00 to 9:45 p.m.

However, a number of courses conducted on the main campus and extension courses in New Britain, Waterbury, and New London are offered on a special basis one day each week. Under this arrangement, the course meets one morning each week from 9:00 to 11:45 a.m. and again the same evening from 7:00 to 9:45 p.m. Students may attend either lecture that week depending upon their work schedule.

Associate Degree Programs Successful completion of the first two years of one of the programs offered by the Department of Criminal Justice with a minimum quality point average of 2.0 qualifies the student for the Associate in Science in either Law Enforcement Administration, Forensic Science, or Correctional Administration.

Public Administration

	Fall	Sem. Hrs.		Spring	Sem. Hrs.
	FIRST YEAR				
E 113	English Composition	3	E 206	Composition & Literature	3
HS 112	Western Civilization II	3	HS 114	Economic History of the Western World	3
	*Science	3		*Science	3
	Math.	3		Math.	3
	Sociology or Psychology	3		Technical Data Processing	3
PE 111	Physical Education	0	IE 105	Physical Education	0
			PE 112		
	Total	15		Total	15
	SECOND YEAR				
A 111	Introductory Accounting	3	A 112	Introductory Accounting	3
EC 133	Principles of Economics	3	EC 134	Principles of Economics	3
PS 121	American Government	3		Literature or Philosophy of Fine Arts	3
BA 216	Statistics	3			
BA 101	Business Law	3	PS 122	State & Local Government	3
			BA 125	Management & Organization	3
	Total	15		Total	15
	THIRD YEAR				
PA 301	Public Administration	3	PA 302	Procedures in Public Admin.	3
PS 216	Urban Government	3	EC 314	Public Finance	3
	Electives	9	PA 307	Urban & Regional Problems	3
				Electives	6
	Total	15		Total	15
	FOURTH YEAR				
PA 405	Personnel Relations in the Public Sector	3	PA 490	Prin. & Practices of Public Health Administration	3
PA 390	Administrative Law	3	PA 512	Seminar in Public Admin.	3
	Electives	9		Electives	9
	Total	15		Total	15

* SC 121-22 Biology with lab is recommnded.

TOTAL: 120 Semester Hours

SCHOOL OF ENGINEERING

THOMAS C. WARNER, JR., DEAN

Bachelor of Science Degree

MAJORS IN:

- CIVIL ENGINEERING
- ELECTRICAL ENGINEERING
- INDUSTRIAL ENGINEERING
- MATERIALS ENGINEERING
- MECHANICAL ENGINEERING

Associate in Science Degree

MAJORS IN:

- ENGINEERING SCIENCE

ENGINEERING

ADMISSION REQUIREMENTS

An applicant for admission to the Enginering Programs should be a graduate of a secondary school of approved standing and should present 15 acceptable units of secondary school work. These should include 4 units of English, 2 units of algerbra, 1 of plane geometry, ½ of trigonometry, and 1 unit each of physics and a second science. Deficiencies in English, mathematics, and/or science may be satisfied by summer school attendance, or by an extension of the stated curriculum for one or two semesters chosen to fit the student's need.
Satisfactory placement in tests covering scholastic aptitude, mathematics, and English, as given by the College Entrance Examination Board (S.A.T.) or American College Testing Program (A.C.T.), is required.

MATRICULATION

Matriculation for Bachelor's Degree Students who have completed at least two semesters or equivalent (30 academic credit hours) with a minimum quality point ratio of 2.00 may apply for matriculation for the Bachelor's degree.
Admission will be limited to applicants who have given evidence of capacity and motivation adequate for upper division work as determined by the chairman of the deparment.
A cumulative quality point ratio of at least 2.00 is required in a Bachelor of Science student's major field.

PROFESSIONAL ACCREDITATION

Professional Accreditation The School of Engineering's Mechanical Engineering curriculum has been accredited by the Engineers' Council for Professional Development (ECPD).

CIVIL ENGINEERING

Civil Engineering Bachelor of Science Program: The oldest of all branches of engineering, Civil Engineering is one of the newer Bachelor of Science programs at the University of New Haven. The continued rapid growth of the nation's and the world's economies requires the expenditure of billions of dollars annually for the design and construction of new facilities for commercial, industrial, institutional, and residential buildings, transportation systems of all types, water supply, and sanitary engineering projects. A major area for future development is pollution control of all types; Civil Engineers will play an important role in this field. The student is exposed to these and other areas and, upon the completion of the prescribed four-year curriculum, receives the Bachelor of Science degree in Civil Engineering.

ELECTRICAL ENGINEERING

Electrical Engineering Bachelor of Science Program: This program is planned to give students a sound foundation for a professional career in the utilization of electricity in the modern industrial world and in the fields of experimental science and technology. The training includes not only mathematics, mechanics, physics, and chemistry, but

also economics and other liberal arts subjects. The student becomes familiar with the calculation of circuits of electric, magnetic, and dielectric types, theory of generators, motors, magnets, and other apparatus, electrical transmission of energy, automation, semiconductors, electronic computers, information theory, microwaves, and related subjects. A great future is open in research in varied areas including the concentrated application of engineering principles to improved productivity and reduction in human drudgery. Upon satisfactory completion of the prescribed four-year curriculum graduating students receive the Bachelor of Science degree in Electrical Engineering.

ELECTRICAL ENGINEERING

Industrial Engineering Bachelor of Science Program: The study of Industrial Engineering prepares a student for a successful career in the manufacturing, research, and service industries. Based as it is on a broad engineering background, the professional program taken in the last two years offers a perspective which enables the graduate to cope with complex problem situations encountered in modern industry. Special attention is given to preparing the student for the intelligent use of computers in modern industrial practice. Upon satisfactory completion of the prescribed four-year curriculum, graduates will receive the Bachelor of Science degree in Industrial Engineering.

INDUSTRIAL ENGINEERING

Materials Engineering Bachelor of Science Program: Materials Engineering is the systematic control of material properties such as strength, electrical conductivity, and corrosion resistance, through the understanding of the internal microscopic structure of materials. Practically every product, tool, machine, or building is constructed with careful attention paid to the materials from which it is made. Concrete must withstand years of heat and extreme cold. Plastics change dramatically with temperature. Rubber compounds support every automobile occupant. Metal parts must withstand heat, tension, compression, and fatigue. Each design and fabrication is a critical process. Materials Engineers are therefore respected experts whose decisions on quality, safety, and materials selection are of vital concern to airlines, government laboratories, steel mills, tire manufacturers, and atomic energy installations.

MATERIALS ENGINEERING

Mechanical Engineering. Bachelor of Science Program: The tremendously broad field of Mechanical Engineering requires a common core of fundamental knowledge which is obtained in the required courses in this major. Upon the completion of these required courses, the student, in consultation with his faculty adviser, selects restricted electives which will give him advanced courses in his area of greatest interest. Some of these areas are shown following the B.S.M.E. program description. Upon satisfactory completion of the prescribed four-year curriculum, graduates will receive the Bachelor of Science degree in Mechanical Engineering.

MECHANICAL ENGINEERING

ASSOCIATE IN SCIENCE

Associate in Science This program provides students with the first two years of a standard four-year engineering program. Since the University of New Haven courses are fully accredited, the student will be in a position to transfer with advanced standing to the four-year Bachelor program, to the Evening Credit Division of the University, or to another institution. Upon satisfactory completion of the prescribed two-year curriculum, graduates may receive the Associate in Science degree.

(Core Requirements for all majors—BS and AS)

FIRST YEAR

	Fall	Sem. Hrs.	Lab. Hrs.	Class Hrs.
E 113	English Composition	3	0	3
[1]M 115/M 117	Calculus I	6	0	6
	or M 117 Calculus I	3	0	3
IE 102	Intro. to the Computer	3	0	3
[2]CH 103	Intro. to General Chemistry w/Lab.	3	3	2
PE 111	Physical Education I	0	0	2
[3]	Elective, General Studies	3	0	3
		15-18	3	16-19

	Spring	Sem. Hrs.	Lab. Hrs.	Class Hrs.
E 201	World Literature I	3	0	3
[4]M 118	Calculus II	4	0	4
CH 105	General Chemistry I w/Lab.	4	3	3
PH 108	Physics I	3	3	2
PE 112	Physical Education II	0	0	2
[3]	Elective, General Studies	3	0	3
		17	6	17

SECOND YEAR

	Fall	Sem. Hrs.	Lab. Hrs.	Class Hrs.
M 203	Calculus III	4	0	4
PH 209	Physics II	3	3	2
CE 201	Statics	3	0	3
E 202	World Literature II	3	0	3
EE 223	Principles of Electrical Engineering I	3	0	3
EC 133	Principles of Economics I	3	0	3
		19	3	18

	Spring	Sem. Hrs.	Lab. Hrs.	Class Hrs.
[5]M 204	Differential Equations	4	0	4
PH 210	Physics III	3	3	2
CE 202	Mechanics of Materials I	3	3	2
ME 204	Dynamics	3	0	3
EE 224	Principles of Electrical Engineering II	3	0	3
IE 204	Engineering Economics	3	0	3
		19	6	17

[1] Students will take Course M 117 or M 115/117 based on results of placement test in mathematics.
[2] Students who are qualified may omit CH 103.
[3] Students may elect two semesters from any General Studies area, such as History, Psychology, Philosophy, Sociology, Political Science, etc.
[4] Transfer students taking mathematics course M 137 will omit courses M 117 and M 118.
[5] Industrial Engineering majors may substitute M 231.

TOTAL—Associate in Science Degree in Engineering Science: 67 to 73 Semester Hours.

CIVIL ENGINEERING

THIRD YEAR

	Fall	Sem. Hrs.		Spring	Sem. Hrs.
CE 301	Transportation Engineering	3	CE 302	Building Construction	3
CE 307	Mechanics of Materials II	3	CE 303	Steel Design and Construction	3
ME 301	Thermodynamics I	3	CE 304	Soil Mechanics	3
	Elective, General Studies	3	CE 306	Hydraulics	3
	Elective, Restricted	3		Elective, General Studies	3
	Total	15		Elective, Restricted	3
				Total	18

FOURTH YEAR

CE 314	Concrete Design and Construction	3	CE 501	Design Project	3
CE 407	Contracts and Specifications	3		Elective, Free	3
	Elective, Free	3		Electives, Restricted	9
	Electives, Restricted	6		Total	15
	Total	15			

Selection of Electives

Each student will meet with the Chairman of the Civil Engineering Department during the Spring semester of his second year in order to select the restricted electives which will, together with the required courses, result in a program of maximum benefit to the student.
TOTAL—Bachelor of Science Degree in Civil Engineering: 130 Semester Hours Minimum

ELECTRICAL ENGINEERING

THIRD YEAR

	Fall	Sem. Hrs.		Spring	Sem. Hrs.
EE 331	Network Analysis I	3	EE 332	Network Analysis II	3
EE 341	Analog and Digital Computer Applications	3	EE 343	Electrical Machines I	3
EE 347	Electronic Devices and Circuits I	3	EE 348	Electronic Devices and Circuits II	3
EE 355	Switching and Logical Design I	3	EE 351	Elec. System Analysis I	3
	Math Elective	3	EE 349	Elec. Engineering Lab. I	2
	Total	15		Elective, Restricted	3
				Total	17

FOURTH YEAR

EE 461	Electromagnetic Theory	3	EE 453	Elec. Engineering Lab. II	2
	Elective, Free	3		Elective, Free	3
	Electives, Restricted	6		Electives, Restricted	9
	Elective, General Studies	3		Elective, General Studies	3
	Total	15		Total	17

Selection of Electives

Restricted Electives shall be from Engineering or Science and are to be chosen in consultation with department members and must be approved by the Chairman of the Department of Electrical Engineering.

TOTAL—Bachelor of Science Degree in Electrical Engineering: 131 Semester Hours Minimum

Industrial Engineering

THIRD YEAR

	Fall	Sem. Hrs.		Spring	Sem. Hrs.
IE 214	Management Theory	3	A 113	Industrial Accounting	3
IE 224	Programming	3	IE 234	Production Control	3
IE 243	Work Analysis	3	IE 502	Operations Research	3
IE 346	Statistical Analysis	3		Electives, Restricted	9
	Elective, Restricted	3			
	Total	15		Total	18

FOURTH YEAR

IE 233	Cost Control	3	IE 443	Facilities Planning	3
EC 350	Economics of Labor Relations	3	IE 504	Laboratory Thesis	3
	*Math Elective	3		Elective, Free	3
	Elective, General Studies	3		Elective, General Studies	3
	Elective, Restricted	3		Elective, Restricted	3
	Total	15		Total	15

* IE 347 Probability Analysis or any 300 or 400 series math course.

Selection of Electives

Restricted electives are to be chosen in consultation with department members and must be approved by the Chairman of the Department of Industrial Engineering. Students may secure restricted elective guide sheets from the Reception Office or from the department chairman.

TOTAL—Bachelor of Science Degree in Industrial Engineering: 130 Semester Hours Minimum

Materials Engineering

THIRD YEAR

	Fall	Sem. Hrs.		Spring	Sem. Hrs.
MT 219	Principles of Solids I	3	MT 220	Principles of Solids II	3
ME 301	Thermodynamics I	3	MT 304	Mechanical Behavior of Materials	3
	Elective, General Studies	3		Elective, Materials	3
	Elective, Chemistry	4		Elective, General Studies	3
	Elective, Free	3		Electives, Restricted	6
	Total	16		Total	18

MATERIALS ENGINEERING

FOURTH YEAR

MT 331	Non-Ferrous Metallurgy	3	MT 500	Research Project	3
MT 342	Steels & Their Heat Treatment	3		Elective, Free	3
	Elective, Materials	3		Electives, Restricted	9
	Electives, Restricted	6		Total	15
	Total	15			

Selection of Electives

Each student will meet with the Chairman of the Materials Engineering Department during the Spring term of his second year to select the restricted electives which will result in a program of maximum benefit to the student.

TOTAL—Bachelor of Science Degree in Materials Engineering: 131 Semester Hours Minimum

MECHANICAL ENGINEERING

Mechanical Engineering

THIRD YEAR

	Fall	Sem. Hrs.		Spring	Sem. Hrs.
ME 301	Thermodynamics I	3	ME 302	Thermodynamics II	3
ME 303	Prin. of Engrg. Analysis	3	ME 311	Machine Elements	3
CE 307	Mech. of Materials II	3	ME 315	M.E. Lab. I	2
	Elective, General Studies	3	ME 321	Fluid Mech.	3
	Elective, Restricted	3		Elective, General Studies	3
	Total	15		Elective, Restricted	3
				Total	17

FOURTH YEAR

ME 404	Heat & Mass Transfer	3	ME 415	M.E. Lab. II	2
*MT 219	Principles of Solids I	3		Elective, Free	3
	Elective, Free	3		Electives, Restricted	12
	Electives, Restricted	6		Total	17
	Total	15			

*MT 200 may be taken in place of MT 219.

Selection of Electives

Restricted electives are limited to scientific or technical fields and must be approved by the Department Chairman. Students are welcome to consult the chairman early in their studies for the purpose of planning a suitable program. More detailed information about requirements and electives is available from the Mechanical Engineering Department.

TOTAL—Bachelor of Science Degree in Mechanical Engineering: 131 Semester Hours Minimum

COURSE DESCRIPTIONS — UNDERGRADUATE SCHOOLS

ACCOUNTING Jeffrey L. Williams, Chairman

A 111-112 Introductory Accounting. Credit, 6 semester hours.

Prerequisite to all other courses in accounting.
Offered also in Spring Semester on a two nights per week basis.
Familiarizes the student with fundamental principles of accounting. Supplemented by progress tests, problems, and systematic practice work. Interpretation of assets, liabilities, and net worth; preparation of statements; books of original entry; ledgers; and work at the end of a fiscal period.

A 113 Industrial Accounting. Credit, 3 semester hours.

Open only to Arts and Sciences, Engineering, and Law Enforcement students.
Acquaints students with the vocabulary of accounting, the accounting cycle, and the presentation of accounting statements.

A 221-222 Intermediate Accounting. Credit, 6 semester hours.

Prerequisite: A 112.
Continuation at a more advanced level of the principles studied in Introductory Accounting. Adapted to present-day changes in the accounting profession. The corporation, asset valuations, liabilities, installment sales and consignments, analysis and interpretation of financial statements, sources and application of funds, depreciation methods, inventory evaluation, reserves, and surplus analysis. Considerable practice in the form of problem solutions. Reference made to the publications of the professional accounting societies.

A 223-224 Cost Accounting. Credit, 6 semester hours.

Prerequisite: A 112.
Cost concepts, classifications, and systems from the point of view of cost determination (accumulation of material, labor, and overhead by jobs, processes, etc.), cost control (budgets, standards, etc. compared to actuals), and cost analysis and reporting for intelligent management decisions. Differential and comparative cost analysis, break-even analysis, capital expenditure planning, and internal profit measurements and pricing policies.

A 331-332 Advanced Accounting Credit, 6 semester hours.

Prerequisite: A 222.
Final general accounting course covering all phases of accounting not previously covered and not considered of a specialized nature. Given in two sections, neither dependent upon the other. Upon completion of these sections, the student is prepared for advanced study in specialized accounting problems.

A 333 Auditing I. Credit, 3 semester hours.

Prerequisite: A 222.
Evaluation of the effectiveness of the various accounting systems and procedures as they relate to internal control. Auditing procedures to test reliability are developed, followed by teachings of prerequisites that are to be met for auditing standards applicable to "field work." A practice case links the course to practice.

A 334 Auditing II. Credit, 3 semester hours.

Prerequisite A 333.
Introduction to the profession of auditors (internal and independent). Intricacies and variety of audit report presentations. Full coverage of auditing standards and latest developments in the field of auditing. Principle of internal control questionnaire and audit program designs.

A 335 Income Tax Procedures I. Credit, 3 semester hours.

Prerequisite: A 112.
The law and the procedures for individual income tax returns. Includes the determination of gross income, ordinary gains and losses, capital gains and losses, dividends, deductions of all kinds, and withholding.

A 336 Income Tax Procedures II. Credit, 3 semester hours.

Prerequisite: A 335.
Continuation of the law and procedures to cover installment sales, inventories, accounting, etc., and handling taxes of partnerships, estates and trusts, and corporations, including reorganizations, personal holding companies, etc. Processes of filing returns, paying taxes, and getting refunds. Coverage of Social Security, Federal Estate and Gift taxes.

ART Elizabeth J. Moffitt, Coordinator

ART 101-102 Introduction to Studio Art. Credit, 6 semester hours.

This course provides a foundation to further study in the visual arts and is designed to heighten the sensitivity and awareness of the individual. There will be an exploration of the expressive potential of a variety of materials. Problems in drawing, painting, and design. Contemporary art forms will be viewed in their historical relationship to those of the past.

ART 122 Layout and Printing Techniques. Credit, 3 semester hours.

Techniques of layout, lettering, and design in relation to printing methods.

ART 201 Drawing and Painting I. Credit, 3 semester hours.

Problems in drawing will include exercises in coordination of hand and eye, manipulation of line for articulation of space and form, perspective, figure drawing and experience with various drawing materials. In painting, problems in pictorial composition will involve the manipulation of form and color using a variety of pigments and materials.

ART 203 Commercial Art. Credit, 3 semester hours.

Problems of graphic arts and advertising. Relations between the arts and methods of communication. An introduction to the fields of advertising, illustration, and editorial art; the role of the advertising agency; and the analysis of ideas for visual statement.

ART 204 Commercial Art II. Credit, 3 semester hours.

Prerequisite: Art 203.

The organization and presentation of a project which demonstrates the student's ability to apply theory on a professional level. Work for presentation in the form of a portfolio is developed through individual instruction and criticism.

ART 211-212 Design I and II. Credit, 6 semester hours.

Exploration of basic visual elements; line, color, texture, shape, size, volume, space, and the psychic response they elicit. Organization of visual elements in effective design. Interaction of color.

ART 231 History of Art to the Renaissance. Credit, 3 semester hours.

World art as an expressive and social phenomenon from its earliest beginnings, through religious and cultural cycles, to the visual developments of the Renaissance.

ART 232 History of Modern Art. Credit, 3 semester hours.

Art of the twentieth century in Europe and America, its roots in the past, its function as an expression of our contemporary civilization.

ART 301 Drawing and Painting II. Credit, 3 semester hours.

Further study in two dimensional formulations by means of exploitation of form and color for expressive content. Experimentation with various drawing techniques for maximum effectiveness. Figure drawing.

ART 302 Advanced Drawing, Credit, 3 semester hours.

Prerequisite: Art 201.

Further study of graphic articulations using a variety of materials: pen, ink, charcoal, pencil, mixed media. Experimentation with techniques and refinement of means. Study of forms in nature. Life drawing.

ART 311 Introduction to Sculpture. Credit, 3 semester hours.

The exploration of three dimensional materials for maximum effectiveness in expressive design. Experimentation with clay, plaster, wood, stone, canvas, wire screening, metal, found objects, etc.

ART 312 Lettering. Credit, 3 semester hours.

Prerequisite: Art 211.

Design and execution of basic hand lettering with pen and brush; utilization of hand lettering and type in the design of printed matter; use of letter forms as an element of visual design.

ART 313-314 Photography I and II. Credit, 6 semester hours.

A course designed to explore the technical aspects of photography as a means for the development of the student's sensitivity to the image as an art form. Laboratory course. Technical demonstrations and experimental laboratory techniques. Emphasis on black and white. Group criticisms. Field trips.

Laboratory Fee: $15.00.

ART 315 Printmaking. Credit, 3 semester hours.

The expressive potential of the graphic image through the techniques of silkscreen, wood cut, wood engraving, linoleum blockprint, collotype, nonotype, and photo-silkscreening. Problems in black and white and color.

Laboratory Fee: $15.00.

ART 331 Contemporary Art.
Credit, 3 semester hours.
Art as an expressive and social phenomenon from 1945 through the developmental happenings of the present.

ART 401 Studio Seminar I.
Credit, 1-4 semester hours.
Prerequisites: Art 101-102, Art 201, Art 302 or Art 313, and Art electives.
Drawing on his development through his previous study the student will concentrate on major projects in areas of his choice.

ART 402 Studio Seminar II.
Credit, 1-4 semester hours.
Prerequisite: Art 401.
Continuation of Studio Seminar I.

ART 599 Independent Study.
Credit, 1-3 semester hours per semester with a maximum of 12 semester hours.
Prerequisites: Consent of faculty member and chairman of department.
Opportunity for the student under the direction of a faculty member to explore an area of interest to him. This course must be initiated by the student.

BUSINESS ADMINISTRATION

Ward Theilman, Chairman

BA 101 Business Law I.
Credit, 3 semester hours.
Contract law as a foundation for anticipating legal difficulties and making the best use of legal advice. Functional and policy problems in the legal resolution of a controversy. The origin and development of common, statutory, and constitutional law and of the functioning of the judicial system.

BA 102 Business Law II.
Credit, 3 semester hours.
Prerequisite: BA 101.
Agency, partnerships, corporations, and legal aspects of marketing.

BA 105 Principles of Marketing.
Credit, 3 semester hours.
The fundamental functions of marketing involving the basic principles of the flow of goods and services from producer to consumer. Marketing methods, policies, and problems of the manufacturer, wholesaler, and retailer are reviewed through analysis of channels of distribution, price policies, competition, and market information.

BA 107 Advertising and Promotion.
Credit, 3 semester hours.
Prerequisite: BA 105 or equivalent.
The design, management, and evaluation of the various communications programs involved in marketing and public relations.

BA 113 Business Finance.
Credit, 3 semester hours.
Prerequisite: A 111 or Instructor's consent.
Brief study of the unincorporated business enterprise. The modern corporation. Basic security types of stocks and bonds, capital structure, promotion, investment, banking, government regulation, administration, sources and uses of working capital, expansion, combinations, mergers, refinancing and recapitalization, and failure and reorganization.

BA 118 Business Mathematics I.
Credit, 3 semester hours.
This course emphasizes basic mathematical techniques as they apply to business: logarithmic functions, progressions, exponential growth, and the mathematics of finance; breakeven and inventory models; and matrix algebra.

BA 125 Management and Organization.
Credit, 3 semester hours.
The business organization, stressing the conceptual foundations of business. Ethical and behavioral issues in organizing. The authority, responsibility, and accountability in organization and managment which underlie businesses of every legal form.

BA 128 Quantitative Techniques in Managament.
Credit, 3 semester hours.
Prerequisite: BA 118.
With emphasis on more rigorous applications of quantitative techniques in Business, this course stresses probability theory and probabilistic decision models, systems of linear related analysis.

BA 203 Physical Distribution Management.
Credit, 3 semester hours.
Prerequisite: BA 105.
Planning organization, management, and operation of logistic systems, with emphasis on the effective use of transportation to meet the objectives of a business.

BA 216 Statistics.
Credit, 3 semester hours.

Prerequisite: BA 128 or equivalent.
A course in elementary statistical concepts such as frequency distributions, measure of central tendency, measures of variability, the normal curve, point and interval estimation, sampling distributions, and simple decision theory.

BA 221 Law of Sales.
Credit, 3 semester hours.

Prerequisite: BA 102.
This course is an advanced study of Business Law comprising: bailments; duties and liabilities of bailees, common carriers, and warehousemen; the laws governing the rights of parties engaged in the transfer of personal property. Questions of title, risks assumed, rights of creditors, express and implied warranties, buyers and sellers remedies, together with the business background out of which such relations arise, are also considered.

BA 222 Law of Commercial Paper and Bankruptcy.
Credit, 3 semester hours.

Prerequisite: BA 221.
This course is a study of the Negotiable Instruments Law, dealing with negotiable promissory notes, bills of exchange, and bank credits with an analysis of their form and function in commercial transactions. A brief survey of bankruptcy procedure under the federal bankruptcy laws is included.

BA 227 Risk and Insurance.
Credit, 3 semester hours.

Prerequisite: BA 125.
The importance of risk in business affairs; risk situations analyzed; the different methods of meeting risk considered; extended consideration given to the various forms of insurance coverage.

BA 229 Financial Management.
Credit, 3 semester hours.

Prerequisite: BA 113.
Analytical techniques for dealing with financial problems and their application to corporate financial management. Capital budgeting, cost of funds, capital structure, valuation, and some aspects of investment problems.

BA 230 Investments.
Credit, 3 semester hours.

Prerequisite: BA 113 or EC 134 or Instructor's consent.
Investment media and institutions in the capital markets, the determination of investment values, and the analytical tools of investment appraisal and portfolio management.

BA 231 Industrial Relations.
Credit, 3 semester hours. (SO 411.)

Prerequisite: BA 125.
Human factors in the management function including union-management relations, history of human relations, individual and group productivity, the company, and the community.

BA 250 Quantitative Analysis.
Credit, 3 semester hours.

Prerequisite: BA 128.
Basic analytical geometry and functions, and differential and integral calculus used to solve business problems.

BA 301 Retailing.
Credit, 3 semester hours.

Prerequisite: BA 105.
Modern merchandising methods used by retail stores, including store organization, buying, pricing, receiving, marketing, publicity, selling, record keeping, and stock control.

BA 302 Industrial Marketing.
Credit, 3 semester hours.

Prerequisite: BA 105.
Practices and policies in the distribution of industrial goods, including purchasing practices, market analysis, channels of distribution, distribution and pricing policies, competitive practices, and operating costs.

BA 312 International Business.
Credit, 3 semester hours.

Prerequisite: BA 105.
Principles of International Marketing; the theory of trade and commercial policy; foreign exchange rates, exchange control, and foreign investments; world trade in commodities; methods of exporting and importing; and an evaluation of comparative distribution systems.

BA 315 Marketing Management.
Credit, 3 semester hours.

Prerequisite: BA 105.
Policies, practices, and problems in the field of marketing management; product development, product planning for promotion; market investigation, quantitative and qualitative; pricing and price policies; planning the marketing effort; and control of marketing operations.

BA 316 Sales Management.
Credit, 3 semester hours.

Prerequisite: BA 105.
Problems and resulting policies encountered in the management of a sales organization. Qualifications and duties of the sales manager, departmental organization; recruiting, selecting, training, stimulating, supervising, compensating, and routing salesmen; and territories, quotas, expenses, promotions, and policies.

BA 333 Advanced Statistics. Credit, 3 semester hours.

Prerequisite: BA 216.
A course stressing advanced statistical concepts and statistical methods relating to business. Topics include tests of hypotheses, analysis of variance, sample designs, correlation and linear regression, index numbers, and time series analysis.

BA 342 Marketing Research. Credit, 3 semester hours.

Prerequisites: BA 105 and BA 216.
Use of qualitative and quantitative analysis of the markets in which business operates. Sales analysis, advertising research, product planning and analysis, sources of data and methods of their collection, sampling techniques, methods of tabulation and analyses, methods of organizing and conducting marketing research, budget considerations, etc., with outside readings and term reports.

BA 449 Independent Study. Credit, 3 semester hours.

Independent study to be performed in a project of interest to the student and under direction of a faculty member to be designated by the department chairman. Project, student, and faculty director must be approved by both the department chairman and the Dean of the Business School.

BA 510 Managerial Economics. Credit, 3 semester hours.

Prerequisite: Senior standing and EC 134 and BA 113.
Integrates principles and concepts from the several business and economic fields to exemplify decision processes and strategies applicable to the management of the individual firm.

BA 512 Seminar. Credit, 3 semester hours.

Prerequisite: Senior standing.
A rigorous examination of competing concepts of the role of business in society. A capstone, integrative course relating the firm to its environment. Issues arising from aggregate social, political, legal, and economic factors are stressed.

CHEMISTRY William H. Nyce, Chairman

CH 103 Introduction to General Chemistry w/Lab. Credit, 3 semester hours.

Introductory course in inorganic chemistry dealing with elements, compounds, reactions, atomic structure, chemical bonding solutions, and nuclear reactions. Laboratory work involves weighing and experiments related to the material covered in lectures.
Laboratory Fee: $15.00.

CH 104 Elementary Organic Chemistry. Credit, 3 semester hours.

Prerequisite: CH 103 or permission of the department.
A one-semester introduction to one of the major fields of chemistry designed for students not majoring in chemistry. Nomenclature, structure, and the principal reactions of aliphatic and aromatic organic chemistry will be studied.

CH 105 General Chemistry I w/Lab. Credit, 4 semester hours.

Prerequisite: CH 103 or one high school unit of chemistry, or written qualifying examination.
Application of nuclear reactions, thermochemistry, electrochemistry, the production and properties of metals, the properties of the halogen and sulfur groups, and organic chemistry. Laboratory work related to the material covered.
Laboratory Fee: $15.00.

CH 106 General Chemistry II w/Lab. Credit, 4 semester hours.

Prerequisite: CH 105.
Chemical equilibria, chemical bonding, solutions, the chemistry of nitrogen, carbon, silicon, and boron; the use of spectroscopy to determine structure of compounds. Laboratory work includes experiments in qualitative analysis.
Laboratory Fee: $15.00.

CH 108 Elementary Organic Chemistry Laboratory. Credit, 1 semester hour.

Prerequisite: CH 103.
A laboratory course designed to accompany CH 104. The principal operations of organic synthesis such as refluxing, distillation, filtration, and crystallization are studied and applied in a number of simple preparations.
Laboratory Fee: $15.00.

CH 110 Environmental Chemistry.
Credit, 3 semester hours.

Prerequisite: CH 105 General Chemistry I.
Chemical method of solving pollution problems in three major areas: the air environment, the water environment, and in the treatment of solid wastes. In each area process flow sheets, chemical reactions, and process equipment necessary for the reduction of pollutants will be studied. Recommendations in these areas will also be reviewed.

CH 211 Quantitative Analysis w/Lab.
Credit, 4 semester hours.

Prerequisite: CH 106.
Theory and laboratory training in the preparation of solutions, volumetric and gravimetric analysis, and the use of special laboratory instruments.

Laboratory Fee: $15.00.

CH 301-302 Organic Chemistry w/Lab.
Credit, 8 semester hours.

Prerequisite: CH 106.
The common reactions of aliphatic and aromatic chemistry, emphasis on reaction mechanisms. Laboratory assignments on the technique needed in organic synthesis.

Laboratory Fee: $15.00 per semester.

CH 321-322 Plastics and Polymer Chemistry.
Credit, 6 semester hours.

Prerequisites: CH 106, CH 302.
All phases of the plastics and polymers field, including the chemistry involved, methods, properties of the plastics, and uses of the various materials.

CH 341 Instrumental Methods of Analysis w/Lab.
Credit, 4 semester hours.

Prerequisites: CH 106, CH 211.
The theory of various instrumental methods, including visible ultraviolet and infrared spectroscopy, gas chromatography, mass spectrometry, and nuclear magnetic resonance spectroscopy. Laboratory identification of compounds by the methods discussed in the lectures.

Laboratory Fee: $15.00.

CH 351 Qualitative Organic Chemistry w/Lab.
Credit, 4 semester hours.

Prerequisite: CH 302.
A one-semester laboratory course dealing with the systematic identification of organic compounds.

Laboratory Fee: $15.00.

CH 401-402 Advanced Organic Chemistry.
Credit, 6 semester hours.

Prerequisite: CH 302.
The mechanism of organic reactions, advanced problems in synthetic organic chemistry, and special topics such as stereochemistry and photochemistry.

CH 421-422 Advanced Inorganic Chemistry w/Lab.
Credit, 8 semester hours.

Prerequisite: CH 431. Corequisite: CH 432.
Modern structural concepts, reaction mechanisms, the application of principles of physical chemistry and bonding theory in inorganic chemistry.

Laboratory Fee: $15.00 per semester.

CH 431-432 Physical Chemistry w/Lab.
Credit, 8 semester hours.

Prerequisites: CH 106, PH 202, and M 203.
Fundamental laws of gases, thermodynamics, the theory of atomic and molecular structure, kinetics, and phase equilibria. Laboratory work enables the student to evaluate this subject by studying physical and chemical data.

Laboratory Fee: $15.00 per semester.

CH 433 Advanced Physical Chemistry.
Credit, 3 semester hours.

Prerequisite: CH 432.
Emphasis on the fundamentals of quantum mechanics, statistical mechanics, molecular bonding theory, and spectroscopy. Offered only in the evening.

CH 441 Analytical Chemistry w/Lab.
Credit, 4 semester hours.

Prerequisite: CH 431. Corequisite: CH 432.
Application of instrumental methods to inorganic and organic methods of analysis, including mass, ultraviolet and infrared spectrophotometry, chromatography, and electroanalytical analysis.

Laboratory Fee: $15.00.

CH 451-452 Thesis for Undergraduate Chemistry Majors w/Lab.
Credit, 4 semester hours.

Prerequisites: CH 302, CH 432.
An original investigation in the laboratory under the guidance of a member of the department. Oral discussion of the completed work before the staff at the end of the second semester. Final thesis report. Departmental approval required.

Laboratory Fee: $15.00 per semester.

CH 461 Chemical Spectroscopy: Technique.
Credit, 3 semester hours.

Prerequisite: CH 432.
Introduction to the elementary theory with emphasis on techniques and interpretation of data obtained in applications of infrared, Raman, visible ultraviolet, nuclear quadrupole, electron spin, and nuclear magnetic resonance spectroscopy to the solution of chemical problems. Offered only in the evening.

CH 511-512 Seminar I and II. Credit, 2 semester hours.

Prerequisites: CH 302, CH 432.
Reports and discussions in various fields of chemistry reviewed by students and staff.

CH 599 Independent Study. Credit, 1-3 credit hours per semester with a maximum of 12.

Prerequisites: Consent of faculty member and chairman of department.
Opportunity for the student under the direction of a faculty member to explore an area of interest to him. This course must be initiated by the student.

Plant Visitations. Credit, none.
Open to junior and senior chemistry majors. Visits to plants in the area to investigate plant and laboratory facilities in the chemical industry.

SC 361-362 Biochemistry w/Lab. Credit, 8 semester hours.

See description under Science and Biology.

CIVIL ENGINEERING John C. Martin, Chairman

CE 201 Statics. Credit, 3 semester hours.

Prerequisites: M 118 and PH 108.
Composition and resolution of forces in two and three dimensions. Equilibrium of forces in stationary systems. Analysis of trusses. Centroids and second moments of areas, distributed forces, friction, shear and bending moment diagrams.

CE 202 Mechanics of Materials I. Credit, 3 semester hours.

Prerequisite: CE 201.
Elastic behavior of structural elements under axial, flexural, and torsional loading. Stress in and deformation of members, including beams. Lectures supplemented with laboratory exercises.

CE 203 Surveying I. Credit, 3 semester hours.

Theory and practice of engineering measurements using tape, level, and transit. Practice in topographic mapping, making of profiles, and computations to determine areas of land volumes of earthwork.

CE 204 Water Supply and Sanitary Engineering. Credit, 3 semester hours.

Introduction to the principles of water supply and treatment systems and disposal are described. Course offered, primarily, for non-engineering majors to include the major topics, in a qualitative manner, covered in CE 402 and CE 404.

CE 301 Transportation Engineering. Credit, 3 semester hours.

Prerequisite: IE 204.
Development, organization, administration, and interrelation of transportation systems and facilities, including highways, railroads, airport, rapid transit systems, waterways, and pipe lines. Emphasis placed on economics of location of resources, industry, and population.

CE 302 Building Construction. Credit, 3 semester hours.

Initiation into the planning and anatomy of buildings, materials available and their uses, some principles of construction procedures, general estimating of costs, and relative merits of various types of construction.

CE 303 Steel Design and Construction. Credit, 3 semester hours.

Prerequisite: CE 307.
Analysis, design, and construction of steel structures. Design of frames, members, connections, and other related topics. Tension members, compression members, beams, girders, trusses, and rigid frames. Fabrication and erection, including shop practice.

CE 304 Soil Mechanics. Credit, 3 semester hours.

Prerequisites: M 203 and CE 202.
Structural composition of the earth's crust and the mechanics of its formation. Soil classifications and physical properties are related to the principles underlying the behavior of soils subjected to various loading conditions. Subsurface exploration and laboratory exercises.

CE 305 Highway Engineering. Credit, 3 semester hours.

Prerequisite: CE 301.
Study of traffic, methods of making traffic surveys, safety and accident records, and methods of traffic control. Emphasis on planning of major highways, intersections, and urban streets. Study of pavements, drainage, and general administration and operation.

CE 306 Hydraulics. Credit, 3 semester hours.

Prerequisite: ME 204.
The mechanics of fluids and fluid flow. Laminar and turbulent flow. Flow in pipes and open channels. Orifices and weirs. Fluid pressures. Wave action and erosion. Lectures supplemented with laboratory demonstrations.

CE 307 Mechanics of Materials 2.
Credit, 3 semester hours.

Prerequisite: CE 202.
Elastic and plastic behavior of structural elements such as beams, columns, and shafts under direct and combined loading. Ultimate strength design, theory of failure, composite member design, and an introduction to statistically indeterminate structures.

CE 308 Surveying II.
Credit, 3 semester hours.

Prerequisite: CE 203.
A continuation of Surveying I covering principles of field astronomy, hydrographic surveying, and mine and tunnel surveying. An introduction to the general principles and use of photogrammetric surveying. A study of the boundary and legal aspects of Land Surveying including deed research and its application to boundary determination.

CE 314 Concrete Design and Construction.
Credit, 3 semester hours.

Prerequisites: CE 307.
Analysis, design, and construction of both plain and reinforced concrete structures. Design, utilizing both working stress and ultimate strength techniques, of beams, slabs, columns, and walls. Construction methods, including forming, reinforcing, concrete placing, prestressing, and precasting will be described.

CE 401 Foundation Design and Construction.
Credit, 3 semester hours.

Prerequisite: CE 304 and CE 314.
Design of isolated and combined footings, mats, retaining walls, piers, abutments, pile foundations, and similar structural elements used to safely support buildings, bridges, and other structures.

CE 402 Water Supply and Power.
Credit, 3 semester hours.

Prerequisite: CE 306.
Design of water supply, storage, treatment, and distribution systems. Principles of ground water as it pertains to water supply and wells. Introduction to desalination methods, including economic considerations. Water pollution and its control. Principles of hydroelectric power development.

CE 403 City Planning.
Credit, 3 semester hours.

Engineering, social economics, political, and legal aspects of city planning. Emphasis placed on case studies of communities in Connecticut. Zoning. Principles and policies of redevelopment.

CE 404 Sanitary Engineering.
Credit, 3 semester hours.

Prerequisite: CE 402 or permission of instructor.
Planning of sewer systems, methods of sewage treatment, general construction and operation of plants, handling of industrial and solid wastes. Incineration.

CE 405 Indeterminate Structures.
Credit, 3 semester hours.

Prerequisites: CE 303 and CE 314.
Analysis and design of continuous beams, rigid frames, arches, and multi-story structures of concrete and steel. Elastic and plastic design principles.

CE 407 Contracts and Specifications.
Credit, 3 semester hours.

Prerequisite: CE 302 or permission of instructor.
Principles of contract formation, execution, and termination. Study of specifications and practice in their preparation. Other legal matters of importance to engineers.

CE 501 Design Project.
Credit, 3 semester hours.

Prerequisite: CE 407 or permission of instructor.
Planning and design of an engineering project, starting with map and general requirements as provided by an owner. Preparation of design drawings for the layout and structures. Estimate of cost. Planning construction procedures and schedule.

ECONOMICS Franklin B. Sherwood, Chairman

EC 133 Principles of Economics I.
Credit, 3 semester hours.

Foundations of economic analysis, including economic progress; resources, technology, private enterprise, profits, and the price system. Macroeconomics including national income, employment, and economic growth. Price levels, money and banking, the Federal Reserve System, theory of income, employment and prices, business cycles, and problems of monetary, fiscal, and stabilization policy.

EC 134 Principles of Economics II.
Credit, 3 semester hours.

Prerequisite: EC 133.
Microeconomics including markets and market structure and the allocation of resources. The distribution of income, the public economy, the international economy, and current economic problems.

EC 300 Economic History of the U. S.
Credit, 3 semester hours.

Development of American economic life in the various stages of agriculture, trade, industry, finance, and labor. Change of economic practices and institutions, particularly in business, banking, and labor. The changing role of government.

EC 310 Principles of Economic Geography.
Credit, 3 semester hours.

Distribution of resources, industries, and population in relation to physical, economic, and technological factors. Principles of economic location and regional development.

EC 311 Government Regulation of Business.
Credit, 3 semester hours.

Prerequisites: EC 133-134.
An appraisal of public policy toward transportation, trusts, monopolies, public utilities, and other forms of government regulation of economic activity.

EC 314 Public Finance.
Credit, 3 semester hours.

Prerequisites: EC 133-134.
Theory and practice of public taxation. The budgetary process at all levels of government.

EC 320 Mathematical Methods in Economics.
Credit, 3 semester hours.

Prerequisites: M 115-116.
Applications of various mathematical concepts and techniques in macroeconomic and microeconomic analysis. Special emphasis on the design and interpretation of mathematical models of economic phenomena.

EC 336 Money and Banking.
Credit, 3 semester hours.

Prerequisites: EC 133-134.
Nature and functions of money, commercial banking system, Federal Reserve System and the Treasury, monetary theory, financial institutions, international financial relationships, history of money and monetary policy in the United States, and current problems of monetary policy.

EC 340 Microeconomic Analysis.
Credit, 3 semester hours.

Prerequisites: EC 133-134.
Study of the determination of the prices of goods and production factors in a free market economy and the role of prices in the allocation of resources.

EC 342 International Economics.
Credit, 3 semester hours.

Prerequisites: EC 133-134.
The role, importance, and currents of international commerce; the balance of international payments; foreign exchange and international finance; international trade theory; problems of balance of payments adjustment; trade restrictions; international control of raw materials; economic development and foreign aid.

EC 345 Comparative Economic Systems.
Credit, 3 semester hours.

Prerequisites: EC 133-134.
A comparative study of the economic organization, resource allocation, and growth problems of the United States, British, and French economic systems and the economic systems of the U.S.S.R., Poland, and Yugoslavia.

EC 350 Economics of Labor Relations.
Credit, 3 semester hours.

Prerequisites: EC 133-134.
History of the union movement in the United States, union structure and government, problems of collective bargaining, economics of the labor market, wage theories, unemployment, governmental policy and control, and problems of security.

EC 410 Econometrics.
Credit, 3 semester hours.

Prerequisite: EC 320.
The application of mathematical and statistical methods to both micro- and macro-economic policy issues.

EC 440 Economic Development.
Credit, 3 semester hours.

Prerequisites: EC 133-134.
Economic problems of underdeveloped countries and the policies necessary to induce growth. Individual projects required.

EC 442 Economic Thought.
Credit, 3 semester hours.

Prerequisites: EC 133-134.
The development of economic doctrine from mercantilism and Adam Smith to the thinking of modern day theorists. Emphasis upon the main currents of thought with the applicability to present-day problems. Individual study and reporting.

EC 445 Macroeconomic Analysis.
Credit, 3 semester hours.

Prerequisites: EC 133-134, EC 336, and A 111.
An investigation of the makeup of the national income and an analysis of the factors that enter into its determination; the nature of economic fluctuations and a survey of theories explaining the causes of cycles in general economic activity; counter-cyclical policies; unemployment and economic growth; forecasting economic activity.

EC 450 Thesis.
Credit, 3 semester hours.

A written report on a research project. No class meetings, but periodic conferences with the thesis supervisor.

ELECTRICAL ENGINEERING

John D. Driscoll, Chairman

EE 223-224 Principles of Electrical Engineering.
Credit, 6 semester hours.

Prerequisite: M 118.
Basic concepts in modern network theory and network techniques in analyzing simple and complex electric circuits. Definitions of current voltage relations, circuit elements, resistance, inductance, and capacitance. Circuit equilibrium equations, transformation, Kirchoff's law, network theorems, passive and active networks, superposition. Thevenin and Norton's theorems, d-c transients, solution of simple electric circuits in the sinusoidal steady state by vector and complex algebra. Impedance, capacitance, and reasonance concepts, single phase and three phase alternating currents and voltages, power relations. Magnetic fields and circuits, electromechanical energy conversion.

EE 331-332 Network Analysis I and II.
Credit, 6 semester hours.

A study and analysis of lumped linear electrical networks. Formulation of network integro-differential equations and their solution with emphasis on matrix notations. Introduction to the Laplace transform and its use in network analysis. Pole-zero analysis. Fourier series. Network topology and signalflow graphs. Polyphase circuits. Two part theory. Mutually coupled circuits. Transient and sinusoidal analysis. Tuned circuits. Adjustable circuits.

EE 336 Instrumentation Electronics w/Lab.
Credit, 3 semester hours.

Prerequisite: PH 209.
Cannot be taken for credit by electrical engineering students.
An introduction into instrumentation electronics aiming to provide a working knowledge and understanding of electronic instruments and controls as used in industrial processes. Starting with simple electrical measurements, the course subsequently deals with power supplies, transistor and vacuum tube amplifiers, and oscillators. Practical servo systems and operational amplifiers are treated, as well as simple circuits for electronic switching, and digital counting.

EE 341 Analog and Digital Computer Applications.
Credit, 3 semester hours.

Prerequisites: EE 224 and M 204.
The application of the analog and digital computers in the solution of engineering problems. The concept of an algorithm, numerical analysis, and programming. Operational amplifiers.

EE 343-344 Electrical Machines I and II.
Credit, 6 semester hours.

Prerequisite: EE 331 concurrently.
Processes for the electro-mechanical conversion of energy. The fields, forces, and torques in magnetic systems. Theory, characteristics, applications, and design of direct-current machines. Theory, performance, and applications of transformers, alternating current generators, synchronous motors, single and polyphase induction motors.

EE 347-348 Electronic Devices and Circuits I and II.
Credit, 6 semester hours.

Prerequisite: EE 331 concurrently.
Study of the fundamental principles and uses of electron devices in electronic circuits. Transistor circuits: Bias Stability, models, and frequency response. Multi-stage circuits, Feedback Amplifiers, Tuned Amplifiers and frequency response of RC coupled amplifiers are analyzed. Power and audio amplifiers.

EE 349 Electrical Engineering Lab. I.
Credit, 2 semester hours.

Prerequisites: EE 347-348, EE 331, and EE 343.
Laboratory experiments and problems associated with electrical measurements, electronic devices, and electrical circuits.
Note: Part-time students are charged for a standard 3 semester hour course.

EE 351-352 Electrical System Analysis I and II.
Credit, 6 semester hours.

Prerequisites: M 204 and EE 331.
A study of the techniques of analyzing linear lumped and distributed systems. Dual systems. Continuation of the study of the use and properties of the Laplace transform. Signal flow graphs. Feedback and sample data systems. Stability. Distributed systems. State equations. Probability. Fourier series and integral.

EE 355-356 Switching and Logical Design. Credit, 6 semester hours.

Prerequisites: EE 347 and EE 348 concurrently.
Study of the fundamental concepts of digital systems. Boolean algebra and its use in logical design. Basic logic circuits. Map and tabular methods of minimization. Synchronous and asynchronous sequential circuits. Hazards, arithmetic operations, coding, storage elements, logical design techniques, switching theorems.

EE 420 Introduction to Systems Engineering. Credit, 3 semester hours.

Prerequisite: EE 351.
Systems engineering principles and practices. Probability and statistics and their application to stochastic systems. Simulation and mathematical modeling of deterministic and stochastic systems. Introduction to information theory.

EE 437 Industrial Power Systems Engineering. Credit, 3 semester hours.

Prerequisite: EE 332 concurrently.
Structure of power and distribution of systems; symmetrical components; analysis of unbalanced polyphase power systems; fault calculations; applications to problems of grounding, relaying, and unbalanced operation of apparatus.

EE 438 Electric Power Transmission. Credit, 3 semester hours.

Prerequisite: EE 437.
The fundamentals of electric generation, transmission, and distribution. Transient performances of non-linear characteristic circuits, and power system stability.

EE 445 Communications Theory. Credit, 3 semester hours.

Prerequisite: EE 351.
The analysis of communications circuits and the design of the components of communication systems. Signal analysis, transmission of signals, power density spectra, amplitude, and pulse modulation. Performance of communications systems, noise and information transmission theory.

EE 446-447 Pulse and Digital Circuits. Credit, 6 semester hours.

Prerequisites: EE 348 and EE 355.
A study of circuits used in digital computers and pulse circuits. Topics covered are: Linear and non linear waveshaping, pulse transformers and amplifiers, multi-vibrators, logic circuits, counters, sweep generators, blocking oscillators, sampling gates, counting and timing, synchronization, and frequency division.

EE 450-451 Analysis and Design of Active Networks. Credit, 6 semester hours.

Prerequisite: EE 348.
Study of the techniques for analysis and design of circuits employing active devices with particular emphasis on transistors. Feedback oscillators. Field effect transistor and tunnel diode characteristics and uses. Power supplies and regulators. Integrated circuits. Pulse and Switching Circuits. Broadbanding techniques and cascading effects.

EE 453 Electrical Engineering Lab II. Credit, 2 semester hours.

Prerequisites: Senior Status in Electrical Engineering.
Laboratory experiments and problems associated with electrical machinery, microwaves, digital devices, electronic devices, and automatic controls.
Note: Part time students are charged for a standard 3 semester hour course.

EE 455 Feedback Systems. Credit, 3 semester hours.

Prerequisite: EE 351.
Study of physical system using feedback to form a closed loop. Investigate stability from Root Locus, Routh, Bode, and Nyquist viewpoints. Performance and design, including series of feedback compensation, multiple inputs, and disturbances. Mathematical modeling of system elements and systems.

EE 461 Electromagnetic Theory. Credit, 3 semester hours.

Prerequisites: EE 332 and M 204.
Basic electromagnetic theory as related to the static fields of electric charges and the magnetic fields of steady electric currents. Fundamental field laws. Maxwell's equations, energy distributions, scalar and vestor potentials, method of images, boundary relations, magnetization, polarization, time varying electric and magnetic fields, field plotting. Vector mathematics is used in the mathematical analysis.

EE 462 Microwave Fundamentals. Credit, 3 semester hours.

Prerequisite: EE 461.
The development and application of electromagnetic-field theory to the analysis of high-frequency circuits, wave propagation, reflection in various media including wave-guides, and resonant cavities. The theory of operation of such devices as klystron, magnetron, and traveling wave tubes.

EE 500 Senior Seminar. Credit, 3 semester hours.

Prerequisite: Instructor's consent.
Open to Seniors in Electrical Engineering.
Special topics in the field of electrical engineering. Arranged to suit the interest and requirements of the student, under the supervision of a staff member.

EE 504 **Laboratory Thesis.**
Credit, 3 semester hours.
Prerequisite: Instructor's consent.
Open to Seniors in Electrical Engineering.
Advanced laboratory testing and special problems. Students work on problems of their selection with the approval of the instructor. The work may be done in the form of a thesis or series of experiments.

ENGLISH
Douglas Robillard, Chairman
Paul Marx, Director of Freshman English

EA **College Preparatory English.**
One semester. No credit.
A review of the fundamentals of English for students who do not meet the English requirements for admission to the University. Practice given in writing as well as in grammar.

EB **Reading Laboratory.**
One semester. No credit.
Helps the student to read faster with greater comprehension, to increase vocabulary, and to study more effectively. Supervised reading, training films, exercises, and discussions.

EF **English as a Second Language.**
One semester. No credit.
Designed for foreign-born students whose English is inadequate to do college-level work. Particular emphasis on individual pronunciation problems and use of American English idioms. Laboratory required.

E 113 **English Composition.**
Credit, 3 semester hours.
Prerequisite: Satisfactory performance on English Placement Examination or completion of EA College Preparatory English.
Theme writing with emphasis on thematic content, paragraphing, sentence construction, grammatical principles, and diction. Reading of essays to stimulate thought and illustrate rhetorical principles.

E 114 **Speech.**
Credit, 3 semester hours.
A disciplined approach to oral communication. Objectives are to develop proficiency in locating, organizing, and presenting material and to help the student gain confidence and fluency when speaking extemporaneously.

E 201-202 **World Literature I and II.**
Credit, 6 semester hours.
Prerequisite: E 113.
Selected translations of non-Western literature and of Western literature from Homer to the present. Emphasis upon literary, cultural, and philosophical values.

E 206 **Composition and Literature.**
Credit, 3 semester hours.
Prerequisite: E 113.
Further practice in theme writing. Reading of poetry, fiction, and drama in order to develop skill in analyzing and interpreting literature.

E 211-212 **Survey of English Literature I and II.**
Credit, 6 semester hours.
Prerequisites: E 113, E 206.
Readings in English Literature from its beginnings to the present, with attention to its historical and social backgrounds.

E 213 **Survey of American Literature I.**
Credit, 3 semester hours.
Intellectual and literary movements from Colonial times to the Civil War.

E 214 **Survey of American Literature II.**
Credit, 3 semester hours.
Intellectual and literary movements from the Civil War to the present.

E 217-218 **Survey of Black American Literature.**
Credit, 6 semester hours.
Black American poets, novelists, essayists, and dramatists from the Colonial Era to the present, including such writers as Frederick Douglass, W. E. B. DuBois, Countee Cullen, Richard Wright, James Baldwin, Leroi Jones, and Eldridge Cleaver.

E 220 **Report Writing.**
Credit, 3 semester hours.
Prerequisite: E 113.
Study of the standards inherent in effective reporting, both formal and informal, and of the principles of business letter writing, with practice in writing letters, memos, and reports. To be offered only in Fall semester.

E 267-268 Creative Writing. Credit, 6 semester hours.

Prerequisite: E 206 and Instructor's consent.
Practice in writing the short story, poetry, drama, or non-fiction; choice of genre based upon inclination and ability of the student. Analysis of published materials and student work.

E 301 Literary Criticism and Scholarship. Credit, 3 semester hours.

Major critical theories, with readings from Plato and Aristotle to the present. Bibliographic tools and methods of research.

E 302 History of the English Language. Credit, 3 semester hours.

The development and structure of English, including its Indo-European origins and the elements of Anglo-Saxon. Major emphasis on Middle English and the transition to Modern English. Some study of the distinctive coinage of American English.

E 323 Sixteenth-Century Poetry and Prose. Credit, 3 semester hours.

The social and historical backgrounds of the English Renaissance; readings in the prose writers and in Wyatt, Surrey, Spenser, Sidney, and their contemporaries.

E 326 English Drama to 1642. Credit, 3 semester hours.

The development of the English drama from its beginnings to the middle of the seventeenth century, excluding Shakespeare. Major emphasis upon the Elizabethan and Jacobean drama.

E 341-342 Shakespeare. Credit, 6 semester hours.

E 341 is a prerequisite for E 342.
Introduction to representative comedies, history, plays, tragedies, and poems.

E 353 Literature of the Romantic Era. Credit, 3 semester hours.

Poetry and prose of the major Romantics—Wordsworth, Coleridge, Byron, Shelley, Keats, Lamb, and Hazlitt—with attention given to the milieu of the writers, the Continental background, and theories of Romanticism.

E 356 Later Nineteenth-Century English Literature. Credit, 3 semester hours.

Poetry and prose from 1830-1900. The works of Tennyson, Browning, Arnold, Swinburne, Carlyle, Mill, Newman, Ruskin, and others studied in the light of the social, political, and religious problems of the period.

E 361 Modern British Literature. Credit, 3 semester hours.

British fiction, drama, and poetry from 1900 to the present. Includes works of Conrad, Joyce, Lawrence, Woolf, Huxley, Forster, Shaw, Yeats, Auden, Spender, and Dylan Thomas.

E 362 The Age of Donne and Milton. Credit, 3 semester hours.

Major writers of prose and poetry during the period 1600-1660: Donne, Milton, Burton, Bacon, Herbert, and others.

E 371 Literature of the Neoclassic Era. Credit, 3 semester hours.

British writers of the period 1660-1760, with emphasis upon Dryden, Pope, Swift, Johnson, and others.

E 375 The Age of Chaucer. Credit, 3 semester hours.

A detailed reading and critical study of Chaucer's Canterbury Tales, with some study of his predecessors and the medieval cultural milieu.

E 390 The English Novel I. Credit, 3 semester hours.

The development of the novel in England from Defoe to Dickens and Thackeray.

E 391 The English Novel II. Credit, 3 semester hours.

The development of the novel in England from George Eliot and Hardy to the present.

E 392 Literature of the American Renaissance. Credit, 3 semester hours.

Intensive study of the writings of such figures as Emerson, Thoreau, Hawthorne, Melville, and Whitman, whose works are analyzed in the light of the influences and traditions which led to America's cultural independence.

E 402 Modern Poetry. Credit, 3 semester hours.

A study of the works of representative twentieth-century British, American, and Continental poets.

E 405 Modern Drama. Credit, 3 semester hours.

Principal movements in Continental, British, and American drama from Ibsen to the present.

E 406-409 Continental Fiction. Credit, 3 semester hours.

(One course each semester.)
Selected fiction, in translation, of the European masters, primarily Russian, French, German, or Spanish. Topic to be announced for each semester.

E 411-412 The Literature of Africa. Credit, 6 semester hours.

The chief writings, in English and in translation, of the prose writers, poets, and dramatists of the African nations.

E 478 Contemporary American Literature. Credit, 3 semester hours.

Intensive study of developments in American fiction, poetry, and drama of our time. Readings in the works of such writers as Wolfe, Malamud, Bellow, Theodore Roethke, Robert Lowell, Arthur Miller, and Tennessee Williams.

E 481-488 Studies in American Literature. Credit, 3 semester hours.

Special topics in American Literature, which may include concentration upon a single figure, a group of writers, or a literary theme. Several sections, each on a different topic, may run concurrently.

E 491-498 Studies in English Literature. Credit, 3 semester hours.

Special topics in English Literature, which may include concentration upon a single figure, a group of writers, or a literary theme. Several sections, each on a different topic, may run currently.

E 599 Independent Study. Credit, 1-3 semester hours per semester with a maximum of 12.

Prerequisites: Consent of faculty member and chairman of department. Opportunity for the student under the direction of a faculty member to explore an area of interest to him. This course must be initiated by the student.

FOREIGN LANGUAGES

Bruce A. French, Coordinator
Robert W. Woodworth, Director of Language Laboratory

FR 101-102 Elementary French. Credit, 6 semester hours.

Stresses pronunciation, aural comprehension, and basic conversation; the fundamental principles of grammar; reading comprehension. Not open, except by special permission, to students who offer for college entrance more than one year of high school French.

FR 201-202 Intermediate French. Credit, 6 semester hours.

Prerequisite French 101-102 or equivalent.
Conversation based on the reading of modern prose texts; drill in written and oral self-expression; a review of the principles of grammar.

FR 301-302 Main Currents of French Literature. Credit, 6 semester hours.

Prerequisites: FR 201-202 or equivalent.
Writings representative of significant currents in French literature from the Middle Ages to the Twentieth Century. Opportunity to improve listening and speaking ability. Conducted in French. Laboratory optional, but recommended.

GR 101-102 Elementary German. Credit, 6 semester hours.

Stresses the fundamental principles of grammar; training in pronunciation, aural comprehension, and basic conversation. Some work in the language laboratory outside of class may be required. Not open, except by special permission, to students who offer for college entrance more than one year of high school German.

GR 201-202 Intermediate German. Credit, 6 semester hours.

For students with two years of high school German or one year of college German. Reading comprehension (some scientific texts), advanced study of grammar, composition, and oral self-expression.

IT 101-102
Elementary Italian.
Credit, 6 semester hours.
Stresses pronunciation, aural comprehension, and basic conversation; instruction in the fundamental principles of grammar; training in reading comprehension. Not open, except by special permission, to students who offer for college entrance more than one year of high school Italian.

IT 201-202
Intermediate Italian.
Credit, 6 semester hours.
Prerequisite: IT 101-102 or equivalent.
For students with two years of high school Italian or one year of college Italian. Conversation, advanced study of grammar and composition. Reading in classical and modern writers.

RU 101-102
Elementary Russian.
Credit, 6 semester hours.
Fundamental principles of grammar; training in pronunciation, aural comprehension, and basic conversation. Some work in the language laboratory outside of class may be required. Not open, except by special permission, to students who offer for college entrance more than one year of high school Russian. Offered every other year.

RU 201-202
Intermediate Russian.
Credit, 6 semester hours.
For students with two years of high school or one year of college Russian. A review and continuation of the principles of grammar, greater emphasis on reading comprehension, further drill in written and oral self-expresssion. Offered every other year.

SP 101-102
Elementary Spanish.
Credit, 6 semester hours.
Stresses pronunciation, aural comprehension, and basic conversation; instruction in the fundamental principles of grammar; training in reading comprehension. Not open, except by special permission, to students who offer for college entrance more than one year of high school Spanish.

SP 201-202
Intermediate Spanish.
Credit, 6 semester hours.
Prerequisite: SP 101-102 or equivalent.
For students with two years of high school Spanish or one year of colege Spanish. Conversation, advanced study of grammar and compostition. Works of prominent Spanish-American authors will be read.

SP 301-302
Main Currents of Spanish Literature.
Credit, 6 semester hours.
Prerequisites: SP 201-202 or equivalent.
Writings representative of significant currents in Spanish literature from the Middle Ages to the Twentieth Century. Opportunity to improve speaking and listening ability. Conducted in Spanish. Laboratory optional, but recommended.

HISTORY Thomas Katsaros, Chairman

HS 111
Western Civilization I: to 1700.
Credit, 3 semester hours.
Western Civilization from the ancient beginnings to mid-seventeenth century. The patterns of the social, cultural, and political aspects of ancient, medieval, and early modern eras that have shaped the Western tradition.

HS 112
Western Civilization II: from 1700 to present.
Credit, 3 semester hours.
Prerequisite: HS 111.
European history from the Enlightenment to the present. Emphasis on economic and social changes, political history, the expansion of Europe and its international effects. Nationalism, imperialism, and socialism stressed.

HS 114
The Economic History of the Western World.
Credit, 3 semester hours.
Prerequisite: HS 112.
From pre-industrial Europe to the present. Impact of the Industrial Revolution and World Wars on national policies, labor, business, international economics. The economic development of Western Europe in its relation to Soviet Russia and the United States.

HS 131
History of the Black Man in America.
Credit, 3 semester hours.
A comprehensive study of the Negro in the United States, including African antecedents and an account of slavery, Emancipation and its aftermath, and Negro contributions to the Modern Era.

HS 211
American History to 1865.
Credit, 3 semester hours.
The development of the American nation from colonial times to 1865. Significant economic, social, political, and institutional developments.

HS 212
American History from 1865.
Credit, 3 semester hours.
United States history from the Reconstruction through the contemporary era. Expanding industrialism, the changing concepts of the role of government, and the United States in world affairs.

HS 221 **Comparative European Political Systems.**
Credit, 3 semester hours.
Prerequisites: HS 111-112.
Historical comparative approach to the political institutions of the United Kingdom, U.S.S.R., Federal Republic of Germany, and France. Emphasis on the relationship between Western and Eastern political systems.

HS 223 **U. S. Diplomatic History.**
Credit, 3 semester hours.
Prerequisites: HS 211 and HS 212.
The ideas, trends, and actions of U. S. Diplomacy from the American Revolution to the Spanish-American War; from the emergence of the United States as a world power to the foreign policy of the Nuclear Age.

HS 231 **Modern Asia.**
Credit, 3 semester hours.
The ideological and traditional socio-political-economic-diplomatic background of East, South, and Southeast Asia, the area's development since the impact of the West in the 16th century and the responses to this impact.

HS 308 **Social and Intellectual History of the United States.**
Credit, 3 semester hours.
Prerequisites: HS 211-212.
Leading ideas that have shaped important periods of American history. The colonial mind and spirit, the democratic upheaval, sectionalism—war—and reconstruction, the industrialization of the country, religion as it met the new age of science and economics, agrarian revolt, overseas possessions, the beginning of the end of isolation.

HS 310 **The History of Modern England.**
Credit, 3 semester hours.
Prerequisites: HS 111-112.
British institutions and industrial life from 1688 to the present. Traces the movement of British society from its eighteenth-century aristocratic base through the Liberal experiment of the nineteenth- to twentieth-century collectivism; England's role in international affairs.

HS 311 **American Colonial History.**
Credit, 3 semester hours.
Prerequisites: HS 211-212.
The European background for the discovery and colonization of the New World, and the history of the British colonies in North America until independence. The transformation of transplanted institutions within the American environment.

HS 312 **The U. S. in the Twentieth Century.**
Credit, 3 semester hours.
Prerequisites: HS 211-212.
Political history, social trends, and intellectual movements. Study of the expansion of the functions of government to meet modern complex problems arising from social and cultural trends and from the involvement of the United States in global politics.

HS 314 **The History of Germany from 1648.**
Credit, 3 semester hours.
Prerequisites: HS 111-112.
From the Treaty of Westphalia to the unification of Germany, the imperial era, the two World Wars, and the rise and fall of National Socialism to the problems of divided Germany today.

HS 315 **The History of Europe in the Nineteenth Century.**
Credit, 3 semester hours.
Prerequisites: HS 111-112.
The main political, economic, and intellectual trends in Europe in the period from 1815 to 1914. The effects of industrialism, liberalism, and socialism on European society and culture. In international affairs, the impact of nationalism on European power politics and the failure of the major power to resolve their differences in the Balkans.

HS 317 **Renaissance and Reformation.**
Credit, 3 semester hours.
Prerequisites: HS 111-112.
Economic, political, intellectual, and religious developments in Continental Europe from 1300 to 1650; intellectual and social change during the transition from medieval to modern times; dynastic conflicts within the emerging state system.

HS 321 **The History of Ancient Greece and Rome.**
Credit, 3 semester hours.
Prerequisites: HS 111-112.
From the Homeric period to the year 500 A.D. Events, institutions, and ideas that have shaped the Western tradition. The political, social, economic, and cultural problems that caused the decline of these civilizations.

HS 330 **History of Russia.**
Credit, 3 semester hours.
Prerequisites: HS 111-112.
From the thirteenth century, with particular emphasis on the transition from an agrarian to an industrial society in the period since the emancipation of the serfs in 1861. The role of the U.S.S.R. in world affairs since the Revolution of 1917; its impact upon Asia and the West.

HS 401 Europe in the Twentieth Century.
Credit, 3 semester hours.
The history of Western and Central Europe since World War I viewed from the perspective of Europe's rapidly changing role in world history. Europe's political, social, and economic adjustment to the Russian Revolution and Nazism, the emergence of America and Russia as superpowers, and the loss of overseas possessions.

HS 406 Modern Japanese History.
Credit, 3 semester hours.
The institutional and cultural traditions of Japan, the nature of Japan's feudal society after 1600, and the interplay of indigenous and foreign elements in the changes which affected thought, politics, and society. After the coming of Perry, the adoption and reflection of parliamentary government and the reforms that followed World War II.

HS 407 Colonial and Early Latin America.
Credit, 3 semester hours.
Prerequisites: HS 111-112, 211-212.
European and Indian origins, the formation of a colonial society and culture in the sixteenth and seventeenth centuries, the background and course of anti-colonial upheaval in the early nineteenth century, the problems from the post-independence period to 1890.

HS 408 The History of Modern Latin America.
Credit, 3 semester hours.
Prerequisites: HS 111-112, 211-212.
Latin America since 1890, including the distinctive histories of the major nations of Mexico, Brazil, Argentina, and Chile as well as the characteristics, problems, and prospects of the area as a whole. Inter-American relations and current revolutionary movements.

HS 409 Modern Chinese History.
Credit, 3 semester hours.
The traditional society as it existed prior to the Opium War, China's confrontation with the West and its effect on political, intellectual, and economic developments. The formation and evolution of the present Chinese regime.

HS 410 A History of the Middle East.
Credit, 3 semester hours.
The rise and spread of Islam and the development of an Arabic civilization. Primary attention on Turkey, Egypt, and Iran, the problems created by the Western impact on the peoples and governments of the area, the effect of the Zionist movement on Middle East politics.

HS 413 A History of Africa in Modern Times.
Credit, 3 semester hours.
Morocco, Algeria, Tunisia, and Libya, stressing the institutional histories of these countries, which enabled them ultimately to expel European imperialism. The second part of the course deals with nineteenth-century Africa, the partition of Sub-Sahara Africa by the European powers, the period of colonial domination, and the emergence of the independent states after 1945.

HS 415 Historiography.
Credit, 3 semester hours.
The development of schools of historical thought and interpretation from Thucydides to Toynbee.

HS 416 Senior Seminar.
Credit, 3 semester hours.
Required of all liberal arts students majoring in History, in the last semester of their senior year. The undertaking of an independent study and research project presented in an oral and written form.

HS 599 Independent Study.
Credit, 1-3 semester hours per semester with a maximum of 12.
Prerequisites: Consent of faculty member and chairman of department. Opportunity for the student under the direction of a faculty member to explore an area of interest to him. This course must be initiated by the student.

HOTEL ADMINISTRATION

Howard Fidler, Chairman

HM 321 Principles of Hotel and Restaurant Administration.
Credit, 3 semester hours.
Prerequisite: BA 125.
Financial practices and systems used in hotels and restaurants. Controls, capital budgeting, operational budgeting, use and interpretation of financial statements, and specialized hotel accounting procedures.

HM 322 Markets and Promotion of Public Services.
Credit, 3 semester hours.
Prerequisite: BA 105.
Aspects of the services market with emphasis on consumer behavior. Internal and external stimulation of sales in competitive and non-competitive markets, and the vagaries of environmental concept. Experimental techniques embodied in industry sponsored sales-blitz activities.

HM 410 Hotel Systems and Operations.
Credit, 3 semester hours.

Prerequisite: HM 321.
Analysis and evaluation of hotel systems and operations. Emphasis on analytical techniques, systems, computer-assisted operations, and change-induced problems.

HM 411 Equipment, Layout, and Design.
Credit, 3 semester hours.

The concept of building management is presented as demonstrating the interdependence of planning, construction, equipment, maintenance, personnel and on-premise customer. Develop layout studies, design equipment, estimate budget.

INDUSTRIAL ENGINEERING

Francis J. Costello, Chairman

IE 102 Introduction to Computers: Eng./Sci.
Credit, 3 semester hours.

Prerequisites: M 002 or Equivalent.
An introductory course in computers and FORTRAN for the Engineering and science students. The concept of stored program computers is developed, and the student is taught the basics of the FORTRAN language. The role of problem analysis, program analysis, and programming techniques are presented. Several problems are programmed and debugged by the student and run on the campus computer facility.
Laboratory Fee: $3.00.

IE 105 Introduction to Computers: Bus./S.S./Art
Credit, 3 semester hours.

Prerequisites: M 002 or Equivalent.
An introductory course in the application of the computer to the needs of today's society for the business, social science, and art students. Student use of data processing facilities of the campus computer center, problem solving, logic theory, and the understanding of software packages are put into practice. Student learns how to develop flow charts and writes and debugs programs in COBOL.
Laboratory Fee: $3.00.

IE 119 Industrial Safety and Hygiene.
Credit, 3 semester hours.

Prerequisite: IE 214 or BA 125.
A basic course in industrial accident prevention and industrial hygiene, covering: managerial accident prevention functions and responsibilities; injury data development, usage, and validity; machine guarding techniques and guard development, including point-of-operation drives; personal protective equipment; fire prevention and control, including flammable solvents, dusts, and their characteristics; electrical hazards, hand tools, power and manual; employee training; communications; hazard analysis; accident investigation. Industrial hygiene problems caused by solvents, dusts, noise, radiation are studied, as well as regulatory bodies, laws, and catastrophe hazards.

IE 204 Engineering Economics.
Credit, 3 semester hours.

Prerequisite: M 116 or M 117.
A quantitative analysis of applied economics in engineering practice; the economy study for comparing alternatives; interest formulae; quantitative methods of comparing alternatives; intangible considerations; selection and replacement economy for machines and structures; break-even and minimum cost points; depreciation; relationship of accounting to the economy study; review of current industrial practices. Promotes logical decisions through the consideration of alternative courses of action.

IE 214 Management Theory.
Credit, 3 semester hours.

Prerequisite: Junior or Senior Status.
Provides insight into the elements of the managerial process and develops a rational synthesis of the mass of detail comprising the subject matter of management. Focusing largely upon the complex problems of top and middle-level management, this course investigates what managers do under given circumstances, yet stresses the ongoing activities of management as part of an integrated, continuous process.

IE 223 Personnel Administration.
Credit, 3 semester hours.

Prerequisite: IE 214 or BA 125.
Provides a foundation in fundamental concepts and a general knowledge of techniques in the administration of personnel relations. The nature of personnel administration, the handling of personnel problems, employee attitudes and morale. Techniques of personnel administration: recruitment, interviews, placement, training, employee rating, as well as wage policies and administration. In order to secure breadth and depth in the approach to personnel problems, simple case studies are used at appropriate points throughout the course.

IE 224 Advanced Fortran Programming. Credit, 3 semester hours.

Prerequisites: IE 102 and M 115.
Introduces the student to advanced FORTRAN programming and encourages student utility of the campus computer facility and its peripheral devices. Various typical engineering and scientific computer applications are discussed and demonstrated. Problem solving innovations are presented. The last few weeks are devoted to an introduction of the business language, COBOL.

Laboratory Fee: $8.00.

IE 225 Advanced Cobol Programming and Introductory Fortran. Credit, 3 semester hours.

Prerequisite: IE 105.
Introduces the student to advanced techniques in programming and debugging programs written in COBOL for the campus computer. Various typical systems, analyses, and applications are discussed and demonstrated. The last few weeks are devoted to an introduction of writing and debugging problems written in the scientific language, FORTRAN.

Laboratory Fee: $8.00.

IE 233 Cost Control. Credit, 3 semester hours.

Prerequisites: A 112 or A 113; M 115.
Basic analysis of cost control techniques. Oesigned to give members of the management team the underlying rudiments of cost control systems they will be using and by which they will be measured and controlled. Theory of standard costs, flexible budgeting, and overhead handling techniques emphasized by analytical problem solution.

IE 234 Production Control. Credit, 3 semester hours.

Prerequisites: IE 214 or BA 125; and M 115.
The basic principles that govern production control in an industrial plant. These principles are worked out in the problems of procuring and controlling materials, in planning, routing, scheduling, and dispatching. Familiarizes the student with present and new methods used in this field, including O. R. techniques.

IE 243 Work Analysis. Credit, 3 semester hours.

Prerequisite: M 115.
An introductory course in Motion Analysis, Methods Analysis, and Work Measurement. Motion and Methods Analysis techniques include the Principles of Motion Economy, Process Analysis charting, Operations Analysis, Activity Analysis, and Work Design Layout Analysis. Students are required to design a work place project which will be filmed on CCTV for analysis.
Work measurement includes an introduction to Time Study fundamentals and Pre-Determined Time Systems.

Laboratory Fee: $8.00.

IE 330 Industrial Automation. Credit, 3 semester hours.

Prerequisites: IE 102, EE 224, ME 204.
Develops the fundamental principles of automation, what automation is, and how it is implemented in typical mechanical and processing industries. Topics covered include single loop design, high traffic design, and competitive level design techniques. Tools for automation include: computers, feedback control, simulation, and digital and analog logic.

IE 344 Advanced Work Analysis. Credit, 3 semester hours.

Prerequisite: IE 243.
A course extending the principles introduced in the prerequisite course including the development of Standard Data Systems, formula construction in standard data, Methods-Time-Measurement and Master Standard Data predetermined time systems, Work Sampling, Standards on Indirect Work, Wage Payment Plans, and the use of Closed Circuit TV as a Methods training tool.

Laboratory Fee: $8.00.

IE 346 Statistical Analysis. Credit, 3 semester hours.

Prerequisite: M 203.
Provides an introduction to the application of statistical techniques to industrial and engineering problems, probability and distribution theory, measures of central tendency and dispersion in relation to population and samples, as well as applications of algebraic methods in industrial practice, including advanced statistical methods.

IE 347 Probability Analysis. Credit, 3 semester hours.

Prerequisite: BA 216 or IE 346.
Develops the theory of probability and related applications. Introduces such relevant areas as: combinations and permutations, probability space, laws of large numbers, random variables, conditional probability, Bayes' Theory, Markov chains, and stochastic processes.

IE 402 Numerical Controls and Methods. Credit, 3 semester hours.

Prerequisites: IE 102, ME 124, M 204.
Involves the development and evaluation of methods for computing required numerical results from given numerical data specifically oriented toward numerical controlled machines.

IE 436 Quality Control. Credit, 3 semester hours.

Prerequisite: IE 346.
Economics of quality control; modern methods used by industry to achieve quality of product; preventing defects; organizing for quality; locating chronic sources of trouble; coordinating specifications, manufacturing, and inspection; measuring process capability, using inspection data to regulate manufacturing processes; control charts; selection of modern sampling plans.

IE 443 Facilities Planning.
Credit, 3 semester hours.

Prerequisites: IE 243, IE 204.
Factors in plant location, design, and layout of equipment. The basic principles of obtaining information essential for carrying out such investigations. Survey of such practices as material handling, storage and storeroom maintenance, and use of service departments in modern factories.

Laboratory Fee: $8.00.

IE 502 Operations Research.
Credit, 3 semester hours.

Prerequisite: BA 216 or IE 346.
The Operations Research area is oriented to various mathematical and near-mathematical methods for getting answers to certain kinds of business problems. Simulation including Monte Carlo, queuing, the Flood method for assigning jobs, the transportation method, and linear programming including the simplex method with both algebraic solution and tableaus.

IE 504 Laboratory—Thesis.
Credit, 3 or 4 semester hours.

Prerequisite: Senior I.E. status.
Advanced laboratory testing and special problems. The student works on problems of his own selection which have been outlined by him and have received approval. They may be in the form of a semester thesis or a series of original experiments.

IE 507 Systems Analysis (General).
Credit, 3 semester hours.

Prerequisite: Junior status required.
Presents the analytical and conceptual techniques upon which systems analysis and development is based, and applications to non-business as well as business operations. Development of case studies and their applications independently oriented to the student's major area of interest.

IE 508 Systems Analysis (Business and Engineering).
Credit, 3 semester hours.

Prerequisites: IE 214 or BA 125 and M 115.
Presents the analytical and conceptual techniques upon which systems analysis and development is based, and applications to business and industrial fields. Development of case studies and their applications independently oriented to the student's major area of interest.

IE 510 Business Games:
Credit, 3 semester hours.

Prerequisites: IE 214 or BA 125; and BA 216 or IE 346.
The Business Games area gives the student the opportunity of correlating his entire course of study in a management simulation framework. These training games make use of simulation models that explore specific management areas in depth. Operations research techniques of scientific management are developed. The purposes of these games are as follows: (1) to serve as a framework for training sessions in basic management principles; (2) to serve as an introduction to the problem of manufacturing management; (3) to serve as a focal point for management development discussion of long-range planning and decision assisting tools; (4) to show the student the use of modern electronic computer methods.

JOURNALISM Sydney J. Goluboff, Coordinator

J 101 Journalism I.
Credit, 3 semester hours.

A survey of journalism designed to acquaint students with the profession. The American newspaper as a social institution and a medium of communication. The reporting of public affairs and elementary editing.

J 102 Journalism II.
Credit, 3 semester hours.

Prerequisite: J 101.
The basic principles of journalism and the organizational patterns of the mass media. The gathering of journalistic stories and the writing of general, simple, complex, and feature stories.

J 201 News Writing and Reporting.
Credit, 3 semester hours.

Prerequisites: J 101, E 113.
The elements of news, the style and the structure of news stories, news gathering methods, copyreading, and editing. Practical experience in reporting, writing, and editing.

J 301 Advanced Journalism and Feature Writing.
Credit, 3 semester hours.

Prerequisite: J 201.
Theory of copyreading, editing, feature writing, headline writing, and reporting. Practical problems.

CRIMINAL JUSTICE L. Craig Parker, Jr., Director

CJ 103 Police Organization and Administration I.
Credit, 3 semester hours.

A general study of police organization followed by a detailed study of police administration; includes coordination of all branches of a large police department. An evaluation of line, staff, and auxiliary functions and the interrelationship and interdependence of each. The utilization of planning, analysis, and operations units as administrative aids.

CJ 104 Police Organization and Administration II.
Credit, 3 semester hours.

Prerequisite: CJ 103.
A detailed study of police organization and procedures within a police department and consideration of the principles of organization and methods adopted by progressive departments to insure effective service to the community.

CJ 106 Police Supervision.
Credit, 3 semester hours.

Prerequisite: CJ 103.
Supervisory problems within a police organization and the equating of sound principles of human relations and supervisory techniques to effective police performance. Course includes such topics as discipline, leadership, motivation, conference leadership instruction, and training, as well as a discussion of other tools and devices available to the supervisor in achieving departmental aims and objectives.

CJ 107 Correctional Organization and Administration I.
Credit, 3 semester hours.

Emphasis is placed on the principles of administration in the correctional setting, including budgeting and financial control, recruitment and development of staff, administrative decision-making, public relations, and other correctional administrative functions.

CJ 108 Correctional Organization and Administration II.
Credit, 3 semester hours.

Prerequisite: CJ 107.
The organization of various institutions are studied. Treatment, custody, and support activities are examined as entities and in relation to each other.

CJ 201 Principles of Criminal Investigation.
Credit, 3 semester hours.

An introduction to criminal investigation in the field. Conduct at the crime scene, interview and interrogation of witnesses and suspects, the use of informants, and the techniques of surveillance. The special techniques employed in particular kinds of investigation as well as presentation of the police case in court.

CJ 215 Introduction to Forensic Science.
Credit, 3 semester hours.

Prerequisite: CJ 201.
A classroom lecture-discussion session and a practical laboratory period. Forensic Science (Criminalistics): the observation, collection, positive identification, and preservation of physical, chemical, and biological evidence for court presentation. The connection between the evidence found at the crime scene and the identification, apprehension, and conviction of the criminal. Fingerprints, identification of hairs and fibers, chemicals, narcotics, blood, semen, glass, soil, and wood. Imprint and impression taking, bullet comparison, document examination, and various photographic methods.

CJ 217-218 American Legal System I and II.
Credit, 6 semester hours.

The process through which justice is administered. History of the American Legal System. The Constitution of the United States as it applies to police forces. Also, rules of evidence with attention given to judicial notice, presumptions, the nature of real and circumstantial evidence, burden of proof, province of court and jury, documentary evidence, hearsay evidence, confessions, and admissions of witnesses. Particular emphasis will be given to evidence in criminal cases, presumptions of the penal law, the status of illegally obtained evidence, admission of memorandum book entries, dying declarations, and involuntary confessions.

CJ 221 Juvenile Delinquency.
Credit, 3 semester hours.

Prerequisites: P 111 and SO 113.
A general orientation to the field of delinquency and crime, including all aspects of the social and personal matrix out of which these forms of social destructiveness arise. An attempt is made to build up some consistent theory of causation in order to develop a suitable method of handling these serious problems.

CJ 303-304 Forensic Science Laboratory I & II.
Credit, 6 semester hours.

Greater attention given to specific topics and to laboratory testing and identifications than in CJ 215. In the classroom the laboratory or practical procedures are outlined and discussed. The laboratory work involves testing and identification of evidence, and more detailed procedures are undertaken than in CJ 215. An example would be the casting of hairs and fibers for microscopic identification of material as containing a narcotic or blood.

Laboratory Fee: $15.00 per semester.

CJ 305 Interviewing and Interrogation.
Credit, 3 semester hours.

Prerequisites: P 111 and CJ 201.
Theories, techniques, and tactics used in interviewing witnesses and interrogating suspects of crimes. Instrumental aids used for the detection of deception are included.

CJ 306 Document Examination.
Credit, 3 semester hours.

Prerequisite: CJ 215.
Handwriting analysis. Examination of suspected documents, forgeries, signatures, and anonymous letters, writing materials such as pens, inks, papers. Aging problems. Handwriting identification. Typescript comparison and determination of the type of machine. Erasure decipherment and restoration of handwriting and typescript.

CJ 307 Rehabilitation Theory and Practice.
Credit, 3 semester hours.

Prerequisite: CJ 108.
Current theory and practice in the federal and the various state and municipal systems are examined with emphasis placed upon the state program and upon innovative and progressive practices in other systems. The evolution of correctional practice is surveyed.

CJ 308 Correctional Counseling.
Credit, 3 semester hours.

Prerequisites: P 111 and CJ 307.
Basic concepts for influencing human behavior. Casual, outgoing counseling; formal individual counseling; group counseling. Contributions and limitations of the paraprofessional. Survey of innovative professional techniques, including T-group. Combating offender attitudes and peer pressures.

CJ 311 Criminology.
Credit, 3 semester hours. (See SO 311).

Prerequisites: P 111 and SO 113.
The nature and causation of crime. Approaches to the study of crime, its treatment and prevention. The sociology of criminal law and the nature of criminal behaivor; theories and research.

CJ 401 Police Problems Seminar.
Credit, 3 semester hours.

An analysis of major police problems from the viewpoint of both the administrator and the line operations officer. Seeks the integration of established scientific knowledge with practical police experience.

CJ 402 Police-Community Relations.
Credit, 3 semester hours.

Prerequisite: SO 113.
Designed to put the police and community into a broad theoretical context. Sociological and environmental implications examined. Attention given to police practices which have caused much public hostility and which have isolated law enforcement from the rest of society.

CJ 403 Seminar in Scientific Crime Detection.
Credit, 3 semester hours.

Prerequisite: CJ 215.
Discussion of problems and actual cases from the criminal investigation and forensic science points of view. Problems in techniques and tactics in crime detection will be discussed.

CJ 404 Criminal Law.
Credit, 3 semester hours.

The scope, purpose, definition, and classification of Criminal Law. Offenses against the person, habitation and occupancy, property and other offenses. Responsibility in general, and limitations on criminal capacity and its modifying circumstances. Special Defenses. The Connecticut Penal Code will also be discussed.

CJ 501 Criminal Justice Internship.
Credit, 3 semester hours.

Prerequisite: Senior standing and permission of the department chairman.
This program provides monitored field experience with selected federal, state, or local criminal justice agencies or forensic science laboratories subject to academic guidance and review. BA 449 Independent Study may be substituted with approval of the chairman.

MATHEMATICS Joseph M. Gangler, Acting Chairman

All prerequisites for the following mathematics courses must be strictly observed unless waived by permission of the Mathematics Department.

M 001 Mathematics Review I.
No credit. Meets 3 hours per week.

Required of both day and evening students who do not show sufficient understanding of mathematics fundamentals, as determined by entrance examinations. Natural numbers, integers, rationals and irrationals, properties and operations in each, construction and solution of mathematical models using simple equations, and percentages.

M 002 Mathematics Review II.
No credit. Meets 3 hours per week.

Prerequisite: M 001.
Continuation of M 001 offered to both day and evening students who do not show sufficient preparation for the standard course in college mathematics. Exponents, polynomials, rational functions, systems of equations, graphs, complex numbers, and quadratic equations.

M 105 Introductory College Mathematics.
Credit, 3 semester hours.

Cannot be taken for credit by mathematics, physical science, or engineering majors.
Topics include number systems, functions, trigonometry, and an introduction to probability and statistics.

M 115 Mathematical Analysis I.
Credit, 3 semester hours.

Prerequisite: M 002.
Cannot be taken for credit by mathematics and physical science majors. Designed to offer the foundation needed for the study of calculus. Polynomials, algebraic functions, elementary point geometry, plane analytic trigonometry, and properties of exponential functions.

M 116 Mathematical Analysis II.
Credit, 3 semester hours.

Prerequisite: M 115.
Cannot be taken for credit by mathematics, physical science, or engineering majors.
An intuitive approach to topics in functions, analytic geometry, differential and integral calculus, and probability. Designed for an insight into, and appreciation of, the methods of analysis.

M 117 Calculus I.
Credit, 3 semester hours.

Prerequisite: M 115.
The first-year college course for majors in mathematics, science, and engineering; and the basic prerequisite for all advanced mathematics. Introduces differential and integral calculus of functions of one variable, along with plane analytic geometry.

M 115/117 Calculus I.
Credit, 6 semester hours.

Prerequisite: M 002.
A one-semester course meeting six hours per week, which includes topics from M 115 and M 117.

M 118 Calculus II.
Credit, 4 semester hours.

Prerequisite: M 117.
Continuation of first-year calculus, including methods of integration, the fundamental integration theorem, differentiation and integration of transcendental functions, and varied applications.

M 121 Algebraic Structures I.
Credit, 3 semester hours.

A first course in and an orientation to abstract mathematics: elementary logic, sets, mappings, relations, operations, elementary group theory.

M 122 Algebraic Structures II.
Credit, 3 semester hours.

Prerequisite: M 121.
A continuation of M 121 including an introduction to groups, rings, fields, and the real and complex number systems.

M 127 Finite Mathematics.
Credit, 3 semester hours.

Cannot be taken for credit by mathematics, physical science, or engineering majors.
Matrix theory, introduction to linear programming, probability, and sets with applications in the social and management sciences.

M 137 Calculus Topics.
Credit, 4 semester hours.

Prerequisite: Departmental permission.
The theoretical material of the standard first year of calculus, including limits, chain rules, mean value theorems, and a discussion of the fundamental theorem of integral calculus. Upon successful completion, the student is qualified for M 203.

M 203 Calculus III.
Credit, 4 semester hours.

Prerequisite: M 118.
The calculus of multiple variables, covering third dimensional topics in analytics, linear algebra, and vector analysis, plus partial differentiation, multiple integration, infinite series, and indeterminate forms.

M 204 Differential Equations.
Credit, 4 semester hours.

Prerequisite: M 203.
The solution of ordinary differential equations, including the use of Laplace transforms. Existence of solutions, series solutions, matrix methods, non-linear equations, and varied applications.

M 231 Linear Algebra.
Credit, 3 semester hours.

Prerequisite: M 203.
Linear spaces and systems, matrices, linear transformations, quadratic forms, eigenspaces, and other topics.

M 301 Linear Analysis.
Credit, 3 semester hours.

Prerequisites: M 204 and M 231.
Vector spaces, infinite series, tensors, eigenvalue theory, transformations, unitary spaces, and an introduction to functional analysis.

M 303 Advanced Calculus I.
Credit, 3 semester hours. (EE Emphasis)

Prerequisite: M 204.
Topics covered from infinite series include convergence, tests for convergence, integration and differentiation, asymptomatic expansions, and an introduction to real analysis concepts. Topics in complex variables include elementary functions, Cauchy-Riemann equations, Cauchy integral theorem, calculus of residues, integration, and conformal mapping.

M 304 Advanced Calculus II.
Credit, 3 semester hours. (ME Emphasis)

Prerequisite: M 303.
Applied mathematics, including study of the Gamma and Beta functions, Laplace transforms, Legendre polynomials, Bessel functions, product solutions of partial differential equations, and boundary value problems.

M 305 Series Solutions.
Credit, 3 semester hours.

Prerequisite: M 204.
Series solutions of ordinary differential equations, including the hypergeometric type, Fourier analysis, introduction to perturbation methods, and successive approximation solutions of non-linear differential equations.

M 309 Advanced Differential Equations.
Credit, 3 semester hours.

Prerequisite: M 204.
Theoretical analysis and applications of nonlinear differential equations. Phase plane and space, perturbation theory and techniques, series and related methods, stability theory and techniques, and relaxation phenomena.

M 321 Modern Algebra I.
Credit, 3 semester hours.

Prerequisites: M 121 and M 231.
Groups, rings, integral domains, fields, polynomials.

M 325 Number Theory.
Credit, 3 semester hours.

Prerequisite: M 121.
Topics are selected from the following: mathematical induction, Euclidean algorithm, integers, number theoretic functions, Euler-Fermat theorems, congruence, quadratic residues, and Peano axioms.

M 338-339 Numerical Analysis I and II.
Credit, 6 semester hours.

Prerequisite: M 204.
Approximation and error evaluation. Finite differences approximation by polynomial and orthogonal series, solutions of ordinary differential equations, solutions of elliptic, parabolic, and hyperbolic partial differential equations, interpolation, and basic integral equation solutions.

M 341 Sets and Ordered Structures.
Credit, 3 semester hours.

Prerequisite: M 121.
Axiomatic set theory based on the Zermelo-Fraenkel theory, algebra of sets, relations and functions, finite and infinite sets, order, axiom of choice and its equivalents.

M 343 Projective Geometry.
Credit, 3 semester hours.

Prerequisites: M 121 and M 231.
Projective transformations, fixed points, invariants, cross-ratio, conics, Euclidean and non-Euclidean geometries.

M 345 Differential Geometry.
Credit, 3 semester hours.

Prerequisites: M 204 and M 231.
Basic techniques of applied analysis as illustrated with geometry. Tensors, curvature, surface theory, covariant differentiation, Green's & Stoke's type theorems.

M 371 Probability Theory.
Credit, 3 semester hours.

Prerequisite: M 203.
Axiomatic study of probability: sample spaces, combinatorial analysis, independence and dependence, random variables, distribution functions, moment generating functions, central limit theorem.

M 381 Real Analysis I.
Credit, 3 semester hours.

Prerequisites: M 121 and M 203.
Foundations of analysis: sets and functions, real and complex number systems; limits, convergence and continuity, sequences and infinte series, differentiation.

M 412 Real Analysis II.
Credit, 3 semester hours.

Prerequisite: M 381.
Continuation of M 381 including Riemann-Stieltjes integration theory and an introduction to measure theory and the Lebesgue integral.

M 422 Modern Algebra II.
Credit, 3 semester hours.

Prerequisite: M 321.
Continuation of M 321 including topics such as: vector, spaces, modules, commutative ring theory, Galois theory.

M 423 Complex Variables.
Credit, 3 semester hours.

Prerequisite: M 381.
For mathematics, science, and engineering students.
Review of elementary functions and Euler forms; plus holomorphic functions, Laurent series, singularities, calculus of residues, contour integration, maximum modulus theorem, bilinear and inverse transformations, conformal mapping, and analytic continuation.

M 441 Topology.
Credit, 3 semester hours.

Prerequisite: M 381.
Topics selected from the following: Hausdorff neighborhood relations, derived, open and closed sets, closure, topological space, bases, homeomorphisms, relative topology, product spaces, separation axioms, metric spaces, connectedness and compactness.

M 472 Mathematical Statistics.
Credit, 3 semester hours.

Prerequisite: M 371.
Elements of the theory of point estimation, maximum likelihood estimates, theory of testing hypotheses, power of a test, confidence, intervals, linear regression, experimental design and analysis of variance, correlation, and non-parametric tests.

M 491 Deparmental Seminar.
Credit, 3 semester hours.

Independent study of some topic or topics approved by the Chairman of the department. This work is done under the supervision of a faculty member. A paper and/or a seminar talk may be required.

MECHANICAL ENGINEERING

Harry H. Steinhauser, Jr., Chairman

ME 101 Engineering Graphics.
Credit, 3 semester hours.

An introduction to the principles and techniques of graphical communication. Fundamentals of orthographic projections; sections; applied geometry; auxiliary views; analysis of point, line, and plane relationships; detail and assembly drawing of simple machine parts.

ME 102 Engineering Drawing and Design.
Credit, 3 semester hours.

Prerequisite: ME 101.
For technical students and draftsmen, covering layout of assembly drawings; detailing of their parts, properly dimensioned, for interchangeable manufacture; use of A S A tables of metal fits for machine parts; use of threads and fasteners with the use of tolerances and limits.

ME 103 Technology in Modern Society.
Credit, 3 semester hours.

Scientific and technological developments and their implications for the future of society. Prospects and problems in communications, energy sources, automation, transportation, and other technologies. Use and control of technological resources for public benefit.

ME 124 Mechanical Processes.
Credit, 3 semester hours.

Mill and manufacturing processes. The casting of metals, pattern making, and mold preparing. Fabricating, metal cutting, and welding. Demonstrations, laboratory, and inspection trips to local manufacturing plants.

ME 204 Dynamics.
Credit, 3 semester hours.

Prerequisites: CE 201, and M 118 or M 137 (M 118 or M 137 may be taken concurrently).
Kinematics and dynamics of particles and rigid bodies with emphasis on two-dimensional problems. Vector representation of motion in rectangular, polar, and natural coordinates. Impulse-momentum and work-energy theorems. Rigid bodies in translation, rotation and general plane motion.

ME 301 Thermodynamics I.
Credit, 3 semester hours.

Prerequisites: M 118 or M 137.
Classical thermodynamics treatment of first and second laws. Thermal and caloric equations of state. Closed and open systems, and steady flow processes. Absolute temperature, entropy, combined first and second laws. Introduction to statistical thermodynamics: particle distributions, statistical concept of entropy, and relation to macroscopic properties.

ME 302 Thermodynamics II.
Credit, 3 semester hours.

Prerequisites: ME 301, and M 203 or ME 303 (M 203 or ME 303 may be taken concurrently).
Extensions and applications of first and second laws: availability, combustion processes, phase and chemical eqilibrium, ideal gas mixtures, Maxwell's relations. Steam power and refrigeration cycles. Internal combustion engine and gas turbine cycles. Irreversible thermodynamics.

ME 303 Principles of Engineering Analysis.
Credit, 3 semester hours.

Prerequisites: M 118 or M 137, and ME 204 (ME 204 may be taken concurrently).
The formulation and solution of problems arising in the following areas: dynamics, fluid mechanics, heat transfer, structural mechanics, mechanical vibrations, and electrical circuits.

ME 311 Machine Elements.
Credit, 3 semester hours.

Prerequisite: CE 202.
Analysis and design of machine elements to meet specified operating conditions. Stresses, deformations, and other factors in design of machine parts. Application to machine elements such as joints, shafts, gears, couplings, brakes, clutches, and flexible power-transmitting elements.

ME 312 Mechanical Design.
Credit, 3 semester hours.

Prerequisite: CE 307 or instructor's consent.
Continuation of Machine Elements. Design projects selected individually developed by the student.

ME 315 Mechanical Engineering Laboratory No. 1.
Credit, 2 semester hours.

Prerequisites: CE 202, ME 204, and ME 303 (ME 303 may be taken concurrently).
Students conduct selected tests in the fields of mechanics of materials and virbrations. Emphasis placed on organization of the experiment, measurement techniques, sources of error, and organization of the report. Students are required to design, conduct, and present one experiment of their own.
Note: Part-time students are charged for a standard 3 semester hour course.

ME 321 Fluid Mechanics.
Credit, 3 semester hours.

Prerequisites: ME 204, and M 203 or ME 303.
Fluid kinematics: continuity equation, vector operations. Momentum equation for frictionless flow: Bernoulli equation with applications. Irrotational flow: velocity potential, Laplace's equation, dynamic pressure and lift. Stream function for incompressible flows. Rotational flows: vorticity, circulation, lift, and drag. Integral momentum analysis. Navier Stokes equation: stress tensor, Newtonian fluid. Boundary layer approximations.

ME 322 Introduction to Gas Dynamics.
Credit, 3 semester hours.

Prerequisites: ME 302 and ME 321 (ME 321 may be taken concurrently). Compressible fluid flow with emphasis on one-dimensional ducted steady flows with heat transfer, frictional effects, shock waves, and combined effects. Introductory considerations of two and three dimensional flows. Occasional demonstrations will accompany the lectures.

ME 335 Tool Design
Credit, 3 semester hours.

Prerequisites: CE 201 and ME 124 (ME 124 may be taken concurrently). Basic techniques of tool design, methods, analysis, drill jig design, tolerances and allowances, cutting tools, die design, gauges, and fixtures.

ME 336 Tool Engineering.
Credit, 3 semester hours.

Prerequisites: CE 201 and ME 124 (ME 124 may be taken concurrently). A continuation of ME 335 with emphasis on economics, estimating, and process planning. Student design projects requiring the complete planning and designing necessary to manufacture machine parts.

ME 343 Mechanisms.
Credit, 3 semester hours.

Prerequisite: ME 204.
Graphical and analytical methods for determining displacements, velocities, and accelerations of machine components. Application to simple mechanisms such as linkages, cams, gears.

ME 344 Mechanics of Vibration.
Credit, 3 semester hours.

Prerequisites: ME 204 and ME 303.
The mathematical relationships necessary for the solution of problems involving the vibration of lumped and continuous systems; damping; free and forced motion; resonance; isolation; energy methods; balancing; single, two and multiple degrees of freedom; vibration measurement.

ME 401 Mechanical Systems Analysis.
Credit, 3 semester hours.

Prerequisite: ME 303.
Dynamical systems and their characteristics. Analogy of electrical, mechanical, and other systems. Mixed systems—Dimensional Analysis—Design considerations.

ME 403 Introduction to Flight Propulsion.
Credit, 3 semester hours.

Prerequisites: ME 322 and Instructor's consent.
A senior course designed for those students who intend to work or pursue further studies in the aerospace field. Among the topics covered are: Detonation and deflagration, introductory one-dimensional non-steady gas flows, basic concepts of turbo-machinery, and survey of the contemporary propulsive devices. Shock tubes, supersonic wind tunnel, and flame propagation demonstrations will accompany the lectures.

ME 404 Heat and Mass Transfer.
Credit, 3 semester hours.

Prerequisites: ME 302 and ME 321 (ME 321 may be taken concurrently). Conduction in solids, solution of multi-dimensional conduction problems, unsteady conduction, radiation, boundary layer, and convection. Introduction to mass transfer. The lectures will include occasional demonstrations of convection, radiation, heat exchangers, etc.

ME 405 Advanced Mechanical Design.
Credit, 3 semester hours.

Prerequisite: ME 321.
Selected and advanced topics related to the design of machine elements such as hydrodynamic theory of lubrication and principles of hydraulic machines with application to hydraulic couplings.

ME 408 Advanced Dynamics.
Credit, 3 semester hours.

Prerequisites: ME 204, ME 303, and M 204.
Plane and spatial motion of particles and rigid bodies, inertia tensor, relative motion, gyroscopes, central force motion, Lagrangian and Hamiltonian Methods.

ME 415 Mechanical Engineering Laboratory No. 2.
Credit, 2 semester hours.

Prerequisites: ME 302, ME 321, and ME 404.
A survey of experiments and laboratory investigations covering the area of fluid mechanics, thermodynamics, heat transfer, and gas dynamics.
Note: Part-time students are charged for a standard 3-semester-hour course.

ME 512 Senior Seminar.
Credit, 3 semester hours.

Open to Seniors with Chairman's approval.
An independent design, theoretical analysis, or laboratory investigation as chosen by the student and approved by the Chairman of the department. The work is performed by the student with frequent critiques by the responsible faculty member.

MATERIALS ENGINEERING

Richard J. Greet, Coordinator

MT 200 Engineering Materials. SPRING TERM
Credit, 3 semester hours.

The principal engineering materials of modern technology. Physical testing and the evaluation of tests; steels and non-ferrous alloys and their heat treatment; cement, concrete, wood, ceramics, and plastics. Gives engineers sufficient background in these materials to aid them in selecting and setting specifications.

MT 219 Principles of Solids I: Structure. FALL TERM
Credit, 3 semester hours.

Prerequisites: CH 105 and PH 108.
Introduction to the relationships between atomic structure and macroscopic properties such as mechanical strength and ductility. Atomic bonding, crystallography, and phase equilibrium among topics considered.

MT 220 Principles of Solids II: Transport. SPRING TERM
Credit, 3 semester hours.

Prerequisite: MT 219.
Diffusion and transport of mass during phase transformations; transport and rearrangement of charge to determine electric and magnetic properties of solids among topics considered.

MT 301 Welding Metallurgy.
Credit, 3 semester hours.

Prerequisite: MT 220.
Welding and brazing procedures for ferrous and non-ferrous alloys. Demonstrations and examinations of macro and microstructures of welded members. The following processes studied in detail: brazing, metal arc, inert atmosphere, atomic hydrogen, electron beam, laser, and resistance welding.

MT 302 Polymeric Materials.
Credit, 3 semester hours.

Prerequisite: MT 219.
Chemistry and physical properties of rubber and plastic materials. Crosslinking, visco-elasticity, glass-transition, and molding methods.

MT 304 Mechanical Behavior of Materials. SPRING TERM
Credit, 3 semester hours.

Prerequisite: MT 219.
Detailed study of elastic and plastic deformation of materials at room temperature and elevated temperatures. Dislocation theory and microplasticity models.

MT 324 Nuclear Metallurgy.
Credit, 3 semester hours.

Prerequisite: MT 219.
Nuclear reactors, production and fabrication of uranium metal and alloys, metallurgy of zirconium, thorium, plutonium, beryllium, liquid metals used in nuclear reactors, fabrication of reactor components, nondestructive materials testing, and the radiation damage of materials.

MT 331 Non-ferrous Metallurgy. FALL TERM
Credit, 3 semester hours.

Prerequisite: MT 220.
The physical metallurgy of aluminum, magnesium, copper, nickel, zinc, lead, tin, and their alloys covered by lecture, discussion, and laboratory work. Melting, alloying, casting, extruding, rolling, drawing, and heat treating of the metals with emphasis on the effects of variables and reasons therefor. Typical mill and service difficulties analyzed in the light of the specific fundamental principles involved.

MT 342 Steels and Their Heat Treatment. FALL TERM
Credit, 3 semester hours.

Prerequisite: MT 220.
Fundamentals of ferrous physical metallurgy such as the iron-carbon phase diagram, time-temperature-transformation diagrams, hardenability, and the effects of alloying elements. Heat treating discussed in terms of resulting microstructures and physical properties. Practical applications include engineering steels, tool steels, and stainless steels, as well as the requirements of deep drawing low carbon steel.

MT 400 Materials Reactions.
Credit, 3 semester hours.

Prerequisite: MT 219.
Consideration ot chemical reactions in the liquid and solid state of importance to the field of materials engineering. Topics to include extractive metallurgy, internal oxidation, surface treatment, and recycling of secondary materials.

MT 500 Research Project.
Credit, 3 semester hours.

Prerequisite: MT 220, plus senior status.
An independent design, theoretical analysis, or laboratory investigation, chosen by the student and approved by the Chairman of the Department. The work is performed by the student with frequent critiques by a faculty member.

MUSIC

Ralf E. Carriuolo, Coordinator

MU 101 Introduction to Music.
Credit, 3 semester hours.

Some of the basic forms of music and styles of various composers. Music appreciation.

MU 102 The Problems of Music.
Credit, 3 semester hours.

Musical aesthetics and its relationship to the composer and his works. The problem of music as an art form in the twentieth century. A continuation of MU 101.

MU 105-106 Chorus.
Credit, 1-8 semester hours; maximum per semester, 1 credit.

Open to all students interested in group singing. Students with adequate scholastic standing may carry this course for credit in addition to a normal program. Two hours a week.

MU 131 Introduction to World Music.
Credit, 3 semester hours.

Various non-Western musical styles, their cultures and aesthetics; music of the primitive cultures of the Americas and the advanced musics of the Near East and Far East; emphasis on India, the Orient, Southeast Asia, and Indonesia.
Offered Fall semester only.

MU 132 Introduction to American Music.
Credit, 3 semester hours.

Music of the North American continent from the Puritans to the present day; both European and non-European musical traditions, with emphasis on 20th-century development in and out of the concert hall.
Offered Spring semester only.

MU 150 Introduction to Music Theory.
Credit, 3 semester hours.

A basic introduction to the fundamentals of music: physical and acoustical foundations; harmony and melody; modality, tonality, atonality; consonance, dissonance, tension; some introductory composition in choral and contrapuntal styles.
Offered only on demand.

MU 201 Music Analysis and History.
Credit, 3 semester hours.

Prerequisite: Must have basic reading ability in musical notation.
The growth of Western music to 1950. Analysis of musical masterpieces on a technical and conceptual basis.

MU 202 The Development of Contemporary Music.
Credit, 3 semester hours.

Prerequisite: Must have basic reading ability in musical notation.
A continuation of MU 201, from 1850 to the present day. The medium of music as a structural and an emotional tool. Analysis of contemporary theories and compositions.

MU 599 Independent Study.
Credit, 1-3 semester hours per semester with a maximum of 12.

Prerequisites: Consent of faculty member and coordinator of department.
Opportunity for the student under the direction of a faculty member to explore an area of interest to him. This course must be initiated by the student.

PHILOSOPHY

John Collinson, Dean, Arts and Sciences

PHL 111 Introduction to Problems of Philosophy.
Credit, 3 semester hours.

Man's place in the universe, how we discover truth, the nature of beauty and the good, the basis of moral choices, etc.

PHL 113 History of Philosophy through the Renaissance.
Credit, 3 semester hours.

Chronological introduction to problems of philosophy. Pre-Socratics, Plato, Aristotle, Medieval and Renaissance philosophers.

PHL 114 History of Modern Philosophy.
Credit, 3 semester hours.

Chronological introduction to problems of philosophy. Seventeenth Century to the present, including Descartes, Hume, Hegel, Nietzsche, and contemporary philosophers.

PHL 124 Logic and Scientific Method.
Credit, 3 semester hours.

Introduces the student to deduction, warranted induction, and scientific description.

PHL 213 Contemporary Issues in Philosophy.
Credit, 3-6 semester hours.

Content varies with the interest of the instructor and the students. Current philosophical thinking in such areas as natural science, social science, metaphyhics, religion, aesthetics, theory of knowledge, language, existentialism, ethics, and positivism.

PHL 222 Ethics in a Changing Society.
Credit, 3 semester hours.

Prerequisite: PHL 111 or 113.
The major ethical systems in the framework of contemporary society. Ethical norms which point to goals of life and their relation to the issues in science, business, the professions, and other human activities.

PHL 225 Symbolic Logic.
Credit, 3 semester hours.

Prerequisite: PHL 124 or M121.
Formal deductive systems, including the propositional calculus, the calculus of functions, independence of axioms, primitive symbols, interpretation, paradoxes, theory of types, Goedel's theorem.

PHL 240 Philosophy of Science.
Credit, 3 semester hours.

Prerequisite: PHL 111.
A study of the nature of scientific method, the logic of scientific explanation and theory construction, philosophical problems of selected sciences, and questions peculiar to the social sciences.

PHL 250 Philosophy of Religion.
Credit, 3 semester hours.

Prerequisite: PHL 111.
An examination of some philosophical notions used in religious discourse; meaning, truth, fact, being, logic, etc.

PHL 260-261 Development of Jewish Thought.
Credit, 6 semester hours.

The development of Jewish thinking and philosophy and the major issues and movements with which it became involved.

PHL 322 Analysis and Criticism of the Arts.
Credit, 3 semester hours.

Prerequisite: At least 3 semester hours of Philosophy.
The language used to talk about works of art. Form, content, expression, values, the ontological status of the art object.

PHL 599 Independent Study.
Credit, 1-3 semester hours per semester with a maximum of 12.

Prerequisite: Consent of faculty member and dean of Arts and Sciences.
Opportunity for the student under the direction of a faculty member to explore an area of interest to him. This course must be initiated by the student.

PHYSICAL EDUCATION

Donald Wynschenk, Coordinator of Physical Education

PE 111-112
Physical Education (men).
No credit, required for graduation.

Fundamentals and skills of carry-over sports such as tennis, golf, volleyball, paddleball, handball, bowling, skating, swimming, sailing, skiing, softball, badminton, and squash. Understanding and development of skills in spectator team sports such as basketball, soccer, touch football, and softball. Calisthenics and adaptive exercise program.

PE 113-114
Physical Education (women).
No credit, required for graduation.

Fundamentals and skills of carry-over sports such as tennis, golf, handball, bowling, sailing, tennis, skiing, skating, swimming, softball, badminton, and squash. Understanding and development of skills in spectator team sports such as baskeball, soccer, volleyball, and softball. Calisthenics and adaptive exercise.

PE 221-222
Personal Health.
No credit.

Required of all day freshmen who are exempt from PE 111-112 or PE 113-114 due to medical or physical reasons. Personal aspects of hygiene, the principles of healthful living. Mental health, venereal disease, reproduction and marriage, birth control, and the effects of drugs, alcohol, and tobacco on human behavior, and the value of systematic exercise.

PHYSICS Kee W. Chun, Chairman

PH 103-104
General Physics.
Credit, 6 semester hours.

Cannot be taken for credit by students majoring in chemistry, physics, or engineering.
Basic concepts of classical and modern physics, such as fundamental laws and phenomena of mechanics, electricity, magnetism, heat, and optics. Conservation principles, relativity and quantum theory, atomic, nuclear, and solid state physics, geophysics, astrophysics, biophysics, laser and lunar science.

PH 105-106
General Physics Laboratory.
Credit, 2 semester hours.

May be elected concurrently with PH 103-104.
Laboratory Fee: $15.00 per semester.

PH 108
Physics I w/Lab.
Credit, 3 semester hours.

Prerequisite: M 117 or Instructor's consent.
Fundamental concepts and mathematical exposition, including calculus, mechanics, statics, kinematics, Newton's laws, work, energy, power, conservation of energy and momentum, rotational concepts, simple harmonic motion.
Laboratory Fee: $15.00.

PH 201
Techniques in Nuclear Physics.
Credit, 2 semester hours.

Prerequisites: Two semesters of a laboratory science and Instructor's consent.
The instruments and methods of nuclear physics. Experiments may be completed in biology, chemistry, engineering, or physics, according to the interest of the student.

PH 209
Physics II w/Lab.
Credit, 3 semester hours.

Prerequisites: PH 108, M 118.
Fundamental concepts and mathematical exposition, including calculus of electricity and magnetism, electrostatics, direct currents, magnetic effects of a current, electrical instruments, ballistic galvanometer, induced E.M.E., inductance and capacitance, simple harmonic motion, physical basis for A.C. circuits, bridge measurement, potentiometer measurements.
Laboratory Fee: $15.00.

PH 210
Physics III w/Lab.
Credit, 3 semester hours.

Prerequisites: PH 108 and M 118.
Fundamental radiation topics include heat, sound, light; simple harmonic motion, generation of mathematical wave forms, wave propagation, laser demonstration of optical principles, lens systems, theory of color, wave interference, gratings, prisms, filters, spectroscopy.
Laboratory Fee: $15.00.

PH 211
Physics IV.
Credit, 3 semester hours.

Prerequisite: PH 210 or PH 104.
Modern physics fundamentals. Twentieth-century developments in physics. Special relativity, quantum theory of radiation, DeBroglie waves, the Bohr atom, elementary wave mechanics, the solid state, crystal structure, semiconductors, and lasers.

PH 301 Analytical Mechanics.
Credit, 3 semester hours.

Prerequisites: M 204, PH 108, or Instructor's consent.
Intermediate analytical mechanics. Statics and dynamics of particles and rigid body with emphasis on the theory of motion under central forces and on the use of the generalized coordinates; introduction to an elementary Lagrangian and Hamiltonian formalism; small vibrations.

PH 315 Nuclear Physics.
Credit, 3 semester hours.

Prerequisite: PH 211 or Instructor's consent.
Elementary nuclear physics. Nuclear structure, natural radioactivity, induced radioactivity, nuclear forces, and reactions, fission and fusion, reactors, and topics of special interest.

PH 340 Lasers.
Credit, 3 semester hours.

Prerequisite: PH 210 or Instructor's consent.
Laser theory, construction and application to latest engineering and scientific uses.

PH 351-352 Intermediate Electricity and Magnetism
Credit, 6 semester hours.

Prerequisites: PH 209 and M 204.
Electric field, potential, Gausse Law, dipoles, poissions, and LaPlace equations, dialectric theory, steady magnetic fields, electromagnetic induction, magnetic properties of matter. Maxwell equations, L-C-R circuits, A.C. circuit analysis, vacuum tube and transistor circuit theory.

PH 361 Modern Optics.
Credit, 3 semester hours.

Prerequisite: PH 210.
Solid state spectroscopy from the point of view of the research physicist and chemist. Modern optical devices including television pick-up tubes, electro- and injection-luminescent devices, image amplifiers, lasers and holography, fiber-optics, opto-electronics for computers.

PH 371 Advanced Laboratory I.
Credit, 2 semester hours.

Prerequisite: PH 209.
Application of electrical and magnetic theory to ballistic galvonometer, cathode ray oscilloscope, current balance, oscillators, amplifiers, transistor and vacuum tube circuits, design of laboratory measuring equipment. Two 3-hour laboratory periods weekly.
Laboratory Fee: $15.00.

PH 372 Advanced Laboratory II.
Credit, 2 semester hours.

Prerequisite: PH 210.
Selected experiments in optics including lasers (construction and applications), interferometry, and spectrometery.
Laboratory Fee: $15.00.

PH 373 Advanced Laboratory III.
Credit, 2 semester hours.

Prerequisite: PH 211.
Selected experiments in atomic and nuclear physics including nuclear radiation and decay, quantization of charge and light energy, and nuclear magnetic resonance.
Laboratory Fee: $15.00.

PH 400 Statistical Mechanics.
Credit, 3 semester hours.

Prerequisite: Instructor's consent.
An introductory course in classical and quantum statistical mechanics. The canonical ensemble; Maxwell-Boltzmann, Bose-Einstein, and Fermi-Dirac statistics and their applications; statistical interpretation of thermodynamics; transport processes.

PH 401 Atomic Physics.
Credit, 3 semester hours.

Prerequisite: PH 211.
Structure and interactions of atomic systems including Schrodinger's equation, atomic bonding, scattering and mean free path, radiative transitions, and laser theory.

PH 404 Senior Project.
Credit, 1-6 semester hours.

Open only to senior Physics Majors. Individual projects in experimental or theoretical physics to be carried out under direct supervision of a faculty advisor.

PH 406 Solid State Physics.
Credit, 3 semester hours.

Prerequisite: PH 211.
Elementary principles of the electrical behavior of solids as applied to semiconductor, metallurgy, and magnetically activated solid state devices.

PH 451 Elementary Quantum Mechanics.
Credit, 3 semester hours.

Prerequisite: PH 211 or Instructor's consent.
An elementary treatment of nonrelativistic quantum mechanics. Schrodinger's equation with its applications to atomic and nuclear structure; collision theory; radiation; introductory perturbation theory.

PH 452 **Thermodynamics.**
Credit, 3 semester hours.
Prerequisites: PH 108 and Instructor's consent.
An introduction to thermodynamics and kinetic theory. Laws of thermodynamics, entropy, application to simple physical and chemical systems; thermodynamic inequalities and equilibrium; phase transitions; properties of ideal gases; low temperature physics.

PH 470 **Theory of Relativity.**
Credit, 3 semester hours.
Prerequisite: Instructor's consent.
Introductory course on Einstein's theory of Relativity. Special theory of relativity including the Lorentz Transformation, Minkowsky geometry, relativistic mechanics, and electromagnetism. General theory of relativity including principle of equivalence, Einstein's theory of gravitation, graviton.

PH 599 **Independent Study.**
Credit, 1-3 semester hours per semester with a maximum of 12.
Prerequisites: Consent of faculty member and chairman of department. Opportunity for the student under the direction of a faculty member to explore an area of interest to him. This course must be initiated by the student.

POLITICAL SCIENCE

Caroline A. Dinegar, Chairman

PS 110 **Comparative Government and Politics: East Asia.**
Credit, 3 semester hours.
A comparative study of the traditional and modern political and social structures of China, Japan, and Korea, and the functioning of the political system within each country.

PS 120 **Scope and Methods of Political Science.**
Credit, 3 semester hours.
A basic introduction to the discipline of Political Science for Political Science majors: the traditional approach to politics as well as the newer areas of the discipline concerning behavioralism, model building, and the role playing techniques. This course is also an introductory approach to the nature and value of interdisciplinary studies.

PS 121 **American Government and Politics.**
Credit, 3 semester hours.
The American Federal System stressing the constitutional foundations, structures and functions of the national government, the electoral process, and interstate relationships.

PS 122 **State and Local Government and Politics.**
Credit, 3 semester hours.
The philosophical foundations, structures, and functioning of local government in the United States. The impact of technology, change, and regionalism on the traditional governing process at the local level.

PS 124 **Political and Social Thought of the Third World.**
Credit, 3 semester hours. (Same as SO 124)
The emergence of the Third World as a decisive force in world, political, social, economic, and cultural thought.

PS 203 **American Political Thought.**
Credit, 3 semester hours.
American political thought from colonial times to the present. Revolutionary models, party development, and federalist forces along with the philosophical foundations of states rights, the agrarian movement, social Darwinism, and the Black protest movement.

PS 216 **Urban Government and Politics.**
Credit, 3 semester hours.
The organizational and administrative government at the municipal level with special emphasis upon the problems of modern urban America in relation to social and political development.

PS 221 **International Relations.**
Credit, 3 semester hours.
Forces and structures operating at the international level in the modern nation state system: the foreign policy process and the decision-making process, the impact on traditional interstate behavior of the decolonization process, and the economic and political developments since World War II.

PS 222 **United States Foreign Policy.**
Credit, 3 semester hours.
A quantitative and qualitative examination of the foreign policy processs for the United States. The strategy and tactics of a superpower in the twentieth century and the determinants involved in the foreign policy and military policy areas.

PS 223 **International Law and Organization.**
Credit, 3 semester hours.
Prerequisite: PS 221.
The traditional as well as modern approach to international law and organization; major emphasis on the contribution of law and organization to the establishment of a world rule of law and world peace. The League of Nations system and the United Nations system are analyzed.

PS 302 **Constitutional Law.**
Credit, 3 semester hours.
Prerequisite: PS 121.
The principles and concepts of the United States Constitution as revealed in leading decisions of the Supreme Court through the process of judicial review.

PS 304 **Political Parties.**
Credit, 3 semester hours.
Prerequisite: PS 121.
An historical and functional analysis of the American political party system, including a study of interest groups, public opinion, electoral behavior, political leadership, and modern proposals for the reorganization of the existing party system.

PS 308 **Legislative Process.**
Credit, 3 semester hours.
Prerequisite: PS 121.
The role of the legislature in modern American government: the relationship of the electors and the apportionment system to the law-making function, the concept of the veto power, and the committee system within the limitation of constitutionalism.

PS 309 **The American Presidency.**
Credit, 3 semester hours.
The origins of the Presidency and a number of presidential models. The role of the President as Commander-in-Chief, legislative leader, party leader, administrator, manager of the economy, director of foreign policy, and advocate of social justice. The nature of Presidential decision making as well as the source of presidential authority, power, and influence.

PS 318 **Political Sociology.**
Credit, 3 semester hours. (Same as SO 318)
Prerequisite: SO 113. (Offered even years, spring semester.)
Concepts, theories, and basic issues in the sociological analysis of political systems; social factors in political attitudes and behavior with emphasis on understanding the functional and dysfunctional aspects of socio-political coordination and conflict.

PS 401 **Political Theory, Ancient and Medieval.**
Credit, 3 semester hours.
Prerequisite: HS 111.
Western political thought from Plato to Sir Thomas More. Emphasis upon basic concepts and questions consistently raised by political theorists. Required for all Political Science majors.

PS 402 **Political Theory, Modern and Contemporary.**
Credit, 3 semester hours.
Prerequisite: HS 112.
A continuation of PS 401, the theories of selected writers from Thomas Hobbes to the present. Required for all Political Science majors.

PS 416-417 **Senior Seminar in Political Science.**
Credit, 3 semester hours.
Prerequisite: Permission of the department chairman.
The construction and preparation of an individual research project in Political Science by the student and the presentation of that project in oral form within the seminar and in written form as the Seminar Thesis. Required of all Political Science majors.

PS 418 **Public Opinion and Social Pressure.**
Credit, 3 semester hours. (Same as SO 418)
Prerequisites: SO 113, P 111.
An intensive analysis of the nature and development of public opinion with particular consideration of the roles, both actual and potential, of communication and influence.

PS 599 **Independent Study.**
Credit, 3 semester hours.
Directed research on special topics to be decided upon in consultation with the Chairman of the Department.

PSYCHOLOGY David Brown, Chairman

P 111 **Psychology.**
Credit, 3 semester hours.
Important principles of human behavior. Motivation, emotion, learning, personality, intelligence, etc. The utilization of psychological knowledge in relation to everyday human activities.

P 212 **Business and Industrial Psychology.**
Credit, 3 semester hours.
Prerequisite: P 111.
Psychological principles and research findings pertinent to administration in business and industry. Contemporary research of behavior factors in managerial contexts.

P 216 **Developmental Psychology.**
Credit, 3 semester hours.
Prerequisite: P 111.
Processes of development of the child, adolescent and adult, motivation changes in interests, attitudes, and abilities, social and cultural influences.

P 301 Statistics for Behavioral Sciences.
Credit, 3 semester hours.
Prerequisite: 3 semester hours of mathematics at the college level.
Consideration of statistical concepts pertinent to the behavioral sciences. Application of statistical techniques to experimental design and research findings. Required of Psychology majors.

P 305 Research Design and Methods in Psychology I.
Credit, 3 semester hours.
Prerequisites: P 111 and P 301.
Methods of design and analysis in psychological research. Consideration of psychophysical methods, general variables, design problems, problems of inference. Required of Psychology majors.

P 306 Research Design and Methods in Psychology II.
Credit, 3 semester hours.
Prerequisite: P 305.
Methods of design and analysis in perception, learning, motivation, concept-formation, etc. Group and individual research projects.

P 315 Psychology of Learning.
Credit, 3 semester hours.
Prerequisite: P 111.
Psychological principles underlying learning and teaching. Learning theories and their application to behavioral change.

P 321 Social Psychology.
Credit, 3 semester hours. (See SO 320)
Prerequisites: P 111 and SO 113.
The interdependence of social organizations and behavior. The interrelationships between role systems and personality; attitude analysis, development and modification; group interaction analysis; social conformity; social class and human behavior.

P 336 Abnormal Psychology.
Credit, 3 semester hours.
Prerequisite: P 111.
Psychological and organic factors involved in personality disorganization. The psychodynamics and classification of psychoses, neuroses, brain disorders, personality disorders, psychophysiological disorders, transient stress disorders, and mental retardation.

P 341 Psychological Theory I.
Credit, 3 semester hours.
Prerequisites: P 305 and senior class status.
The historical background of contemporary issues in modern psychological schools.

P 342 Psychological Theory II.
Credit, 3 semester hours.
Prerequisite: P 341.
Continuation of Psychological Theory I. Emphasis placed on contemorary problems of psychology in the light of twentieth century developments in theory.

P 350 Theory and Principles of Psychological Measurement.
Credit, 3 semester hours.
Prerequisite: P 301.
The bases for constructing and evaluating standardized tests in psychological, educational, and industrial applications.

P 361 Physiological Psychology.
Credit, 3 semester hours.
Prerequisites: P 111 and SC 121-122.
Endocrinological, neural, sensory, and response mechanisms involved in learning, motivation, adjustment, emotion, and sensation.

P 370 Psychology of Personality.
Credit, 3 semester hours.
Prerequisites: P 216 and P 315.
Major personality theories and their implications for understanding both normal and deviant personality developments.

P 599 Independent Study.
Credit, 1-3 semester hours per semester with a maximum of 12.
Prerequisites: Consent of faculty member and chairman of department.
Opportunity for the student under the direction of a faculty member to explore an area of interest to him. The course must be initiated by the student.

PUBLIC ADMINISTRATION

Joseph A. Parker, Acting Chairman

PA 301 Principles of Public Administration.
Credit, 3 semester hours.
Prerequisites: PS 121 and PS 122.
The development, organization, functions, and problems of national, state, and local administration.

PA 302 Procedures in Public Administration.
Credit, 3 semester hours.
Prerequisite: PA 301.
Administration and management in government through the offices of planning, finance, personnel, and procurement.

PA 307 **Urban and Regional Problems.**
Credit, 3 semester hours.
Methods and analysis of decision making related to urban problems. Topics include housing, racial tensions, poverty, transportation, architectural planning, pollution, and urban politics.

PA 390 **Administrative Law.**
Credit, 3 semester hours.
The basic legal arrangement of administrative organization; rules governing use and exercise of administrative powers; legal procedures for enforcement of bureaucratic responsibility.

PA 405 **Personnel Relations in the Public Sector.**
Credit, 3 semester hours.
Analysis of collective bargaining in the public sector with emphasis on legislation pertaining to government employees.

PA 490 **Principles of Public Health Administration.**
Credit, 3 semester hours.
An examination of the patterns of public health activities, including the delivery systems in the United States.

PA 491 **Public Health Law.**
Credit, 3 semester hours.
Prerequisite: PA 390.
The role of law in public health. Enforcement and administration: legal tools and administrative technique of public health enforcement and administration.

PA 512 **Seminar in Public Administration.**
Credit, 3 semester hours.
Selected topics related to public administration will be discussed.

SCIENCE AND BIOLOGY

H. Fessenden Wright, Chairman and Director of Environmental Studies

SC 111-112 **Physical Science.**
Credit, 6 semester hours.
Science and its relation to other areas of learning and to daily living. Development and unity of physical science as a field of knowledge. Subject material includes astronomy, physics, chemistry, and geology.

SC 121-122 **Biology.**
Credit, 6 semester hours.
A survey of the members of the three biological kingdoms; the basic concepts of cellular structure and function. Comparison of the anatomy and physiology of representative members of the protist, the plant, and the animal kingdoms. Major emphasis placed on the human organism. Student introduced to each of the major subdivisions of biology.

SC 123 **Human Biology.**
Credit, 3 semester hours.
Prerequisite: SC 121.
A condensed study of Human Anatomy and Physiology with some aspects of nutrition and disease included, and an introduction to Population Genetics and Physical Anthropology. Designed to replace SC 122 for those majoring in Psychology, Law Enforcement, and Sociology and Social Services. For laboratory credit, where needed, SC 132 may be taken concurrently or with permission after completing course work.

SC 131-132 **Biology Laboratory.**
Credit, 2 semester hours.
The microscopic examination of cells and tissues and the dissection of various organisms from the earthworm to the fetal pig. Other experiments relate to classroom materials.
Laboratory Fee: $15.00 per semester.

SC 135 **Earth Science.**
Credit, 3 semester hours.
Those areas of science dealing with the earth and its environment. Includes elementary aspects of geology, oceanography, and meteorology.

SC 201 **Genetics.**
Credit, 3 semester hours.
Prerequisites: SC 122, SC 251, or SC 252.
Mendelian genetics and developments that have produced the modern concept of inheritance; the role of DNA and theories of the chemical basis of heredity.

SC 202 **Genetics Laboratory.**
Credit, 2 semester hours.
Prerequisite: SC 201.
Theory and techniques using flies, yeasts, bacteria, and viruses to illustrate the classical genetic theories. An introduction to biometrics is presented.
Laboratory Fee: $15.00.

SC 211-212 **Human Anatomy and Physiology.**
Credit, 6 semester hours.
Prerequisites: SC 122 and SC 132 or SC 251.
The essentials of human anatomy and physiology. Systems studied one at a time, taking up the anatomical features first and then the physiological functions. Both normal and pathological conditions discussed whenever possible.

SC 213-214 Human Anatomy and Physiology Laboratory.
Credit, 2 semester hours.

Prerequisites: SC 122 and SC 132 or SC 251.
For those who need laboratory and are taking SO 208 or SC 211-212. Examination of organs and organ systems, using plastic models, slides of cells and tissues, human bones, and dissection of preserved mammalian organs (cow's eyes, sheep's brain). Transparencies and film loops used as supplemental material.

Labortory Fee: $15.00 per semester.

SC 221 Human Ecology.
Credit, 3 semester hours.

Prerequisites: SC 121-122.
Man's evolution and his impact on his environment. Human evolution, social and cultural behavior, attitudes toward the environment, pollution, resource depletion, economic factors of ecology, and overpopulation.

SC 222 Ecology.
Credit, 3 semester hours.

Prerequisites: SC 122, SC 251 or SC 252.
The interaction of living things, with an emphasis on man, with each other, and with their environment. Includes discussion of existence, food, reproduction, populations, migration, distribution, succession, rhythms, communities, adaptions, and application.

SC 224 Field Ecology.
Credit, 2 semester hours.

Prerequisites: SC 121-122 or SC 251-252; and SC 222, which may be taken concurrently.
One hour of class and one afternoon of laboratory in which basic ecological concepts will be demonstrated by the gathering and interpretation of field and laboratory data.

Laboratory Fee: $15.00.

SC 225 Evolution.
Credit, 3 semester hours.

Prerequisite: SC 122.
Biochemical and organic evolution studied. Physical anthropology and paleontology introduced, and the relationship of evolution to genetics and ecology.

SC 227 Entomology w/Lab.
Credit, 4 semester hours.

Prerequisites: SC 122 and SC 132 or SC 251.
Study of classification, evolution, anatomy, development, ecology, lifecycle, genetics, and systematics of insects, arachnoids, and myriapods. Consideration of insects as major competitors of man, as disease carriers, and of their influences on history and culture. Examples of fundamental biological principles as related to insects are discussed. Insect culture, observation, and dissection are carried out in laboratory.

Laboratory Fee: $15.00.

SC 251 Zoology w/Lab.
Credit, 4 semester hours.

Prerequisites: SC 121 and SC 131 or Biology major.
The general morphology and physiology of animals from the amoeba to man, taken phylum by phylum. Dissection of representative animals from the major phyla, special emphasis on the Phyla Invertebrata.

Laboratory Fee: $15.00.

SC 252 Botany w/La.
Credit, 4 semester hours.

Prerequisites: SC 121 and SC 131 or Biology major.
The comparative structure, function, habitat, and evolutionary relationships of plants, techniques of plant identification and classification. Field trips conducted when possible.

Laboratory Fee: $15.00.

SC 301 Microbiology w/Lab.
Credit, 4 semester hours.

Prerequisites: SC 121 and SC 131; or SC 251 or SC 252; CH 103.
A history of microbiology and a survey of microbial life. Bacteria as characteristic protoypes of all microorganisms; the environment, growth, reproduction, metabolism, and relationship to man of microorganisms.

Laboratory Fee: $15.00.

SC 302 Bacteriology w/Lab.
Credit, 4 semester hours.

Prerequisites: SC 122 and SC 132; CH 103.
Theoretical and laboratory study of the morphology, physiology, and classification of bacteria and other microorganisms. The application of these facts to agriculture, industry, sanitation, public health, and disease.

Laboratory Fee: $15.00.

SC 303 Histology w/Lab.
Credit, 4 semester hours.

Prerequisites: SC 121 and SC 131 or SC 251.
Microscopic and chemical structure of organs and tissues and their cell constituents. Microscopic observations, tissue staining, and slide preparation.

Laboratory Fee: $15.00.

SC 304 Parasitology and Epidemiology w/Lab.
Credit, 4 semester hours.

Prerequisites: SC 251; SC 131 or SC 302.
Life history, physiology, morphology, reproductive cycle, and economic importance of most common parasites of plants and animals. This study is coupled with the spread and control of communicable and organic diseases.

Laboratory Fee: $15.00.

SC 306 Fresh Water and Marine Biology.
Credit, 4 semester hours.

Prerequisites: SC 251, SC 252, and SC 222.
Aquatic organisms, their life-cycles, and their ecological factors. Causes of pollution when equilibria are upset.

Laboratory Fee: $15.00.

SC 307 Comparative Vertebrate Anatomy w/ Lab.
Credit, 4 semester hours.

Prerequisite: SC 251.
The structure, origin, and evolutionary history of the vertebrate organ systems. In the laboratory, representative species of each vertebrate class dissected, with attention given to the individual organ systems.

Laboratory Fee: $15.00.

SC 308 General Physiology w/Lab.
Credit, 4 semester hours.

Prerequisites: SC 251-252, CH 105-106, PH 103-104, PH 105-106.
Basic theories of physiology as applied to plants and animals. Practical aspects and experimental techniques studied in the laboratory.

Laboratory Fee: $15.00.

SC 309 Plant Morphology and Taxonomy w/Lab.
Credit, 4 semester hours.

Prerequisite: SC 252.
Comparative plant structure and reproduction, particularly as related to the classification of plants. Laboratory parallels the classroom, involving examination of microscopic slides, models, preserved specimens, and gross structures of dissected materials.

Laboratory Fee: $15.00.

SC 311 Phycology and Mycology w/Lab.
Credit, 4 semester hours.

Prerequisites: SC 251 and SC 252.
Fresh-water and certain marine algae and the various types of fungi. Structure, physiology, life-cycles, reproduction, nutrition, ecology, their function as disease producers.

Laboratory Fee: $15.00.

SC 331 Animal Behavior.
Credit, 3 semester hours.

Prerequisites: SC 122 and P 111.
Behavioral patterns of animals studied on a comparative basis. Laws and principles of ethology related to genetics, psychology, ecology, evolution, physiology, and social structure.

SC 361 Biochemistry I w/Lab.
Credit, 4 semester hours.

Prerequisites: SC 122, SC 132, SC 251, and CH 106.
Functional groups of organic compounds, the physiological properties of these classes of compounds, and the mechanisms of their elimination from the system. The interaction and synthesis of these compounds will also be studied.

Laboratory Fee: $15.00.

SC 362 Biochemistry II w/Lab.
Credit, 4 semester hours.

Prerequisites: SC 361 or CH 104-108 or CH 301-302; and SC 122, SC 132.
Amino acids, proteins, enzymes, coenzymes, vitamins, carbohydrates, nucleaic acids, lipids, and certain alkaloids are discussed as to their chemical, physical, and biological properties. Isolated enzyme reactions and the more important metabolic pathways are examined.

Laboratory Fee: $15.00.

SC 401 Embryology w/Lab.
Credit, 4 semester hours.

Prerequisite: SC 251.
Origin and development of tissues, organs, and organ-systems during the embryonic and post-embryonic stages. In the laboratory the chick grown and studied at various stages.

Laboratory Fee: $15.00.

SC 402 Cytology w/Lab.
Credit, 4 semester hours.

Prerequisite: SC 362.
Structure and basic concepts of cellular and tissue function on the molecular, subcellular, and cellular level, problems and techniques of cellular biology. Tissue culture techniques in laboratory. The microscope and audio-visual equipment also employed.

Laboratory Fee: $15.00.

SC 403 Pathology w/Lab.
Credit, 4 semester hours.

Prerequisites: SC 212, SC 251, and SC 301.
Causes, symptoms, progress, effect and control of diseases of animals, primarily man. Laboratory observation of diseased cells, tissues, and organs will be conducted partly at the University of New Haven and partly at St. Raphael's Hospital.

Laboratory Fee: $15.00.

SC 405 Neuro-endocrine Physiology.
Credit, 3 semester hours.

Prerequisites: P 111; SC 123 or SC 212.
Morphology and physiology of the neurological and endocrine systems as related to the control of body functions. Relationship to behavior with examples from psychobiology and ethology.

SC 406 Food Science and Technology.
Credit, 3 semester hours.

Prerequisites: SC 301-302; SC 361-362.
Man's food, its spoilage, preservation, and sanitation are presented. Food additives and the waste and pollution of the food industy are also studied.

SC 407 Characterization and Treatment of Wastes w/Lab.
Credit, 4 semester hours.

Prerequisites: SC 135, SC 306, SC 361-362.
The types of waste materials generated by agriculture, industry, transportation, municipalities, and individuals are classified, and the methods of their identification are studied. The various methods of treatment of each type of waste material is covered.

Laboratory Fee: $15.00.

SC 408 Water Quality Control and Pollution Ecology w/Lab.
Credit, 4 semester hours.

Prerequisites: SC 301 or SC 302; SC 306 and SC 407.
Recognition of the organisms of polluted waters and the selection of the most appropriate means of collection and analysis. Proper choice and use of analytical methods for determining water quality with the methods of analyzing the data. The most efficient methods to establish water purity of the desired quality and the ecology of polluted water containing various wastes.

Laboratory Fee: $15.00.

SC 410 General Environmental Health.
Credit, 3 semester hours.

Prerequisites: SC 122 or SC 123; SC 301 or SC 302; and CH 106.
Communicable diseases and their spread and control; environmental factors affecting public health, applications of the principles of sanitation and health to the solution of environmental problems. Population trends and the collection and evaluation of statistics concerned with public health. Various aspects of preventive medicine.

SC 413 Air Pollutants w/Lab.
Credit, 4 semester hours.

Prerequisites: CH 104-108; CH 201; SC 301 or SC 302; SC 361-362.
Physical, chemical, and biological properties and sources of the major air pollutants. New and older methods of sampling, identification, and measurement are presented.

Laboratory Fee: $15.00.

SC 414 Air Quality Control and Management w/Lab.
Credit, 4 semester hours.

Prerequisites: SC 413 and CH 341 (can be taken concurrently).
Historical presentation and definition of air pollution problems. Approaches for abatement and presentation and the strategy to achieve objectives of air quality that meet regional standards.

Laboratory Fee: $15.00.

SC 415-416 Biophysics w/Lab.
Credit, 8 semester hours.

Prerequisites: SC 308 and SC 362.
Principles and properties of large and small molecules in solutions, particularly in body fluids. Physical laws and theories relating to the action of the sense organs, nerves, muscles, and other physiological phenomena. Practical applications are studied or demonstrated in the laboratory.

Laboratory Fee: $15.00 per semester.

SC 417-418 Bio-Techniques.
Credit, 8 semester hours.

Prerequisites: Biology major and permission of instructor.
Clinical and research techniques used in the biological sciences. Advanced microscopy, photomicroscopy, cell and tissue culturation, clinical techniques, and instrumental procedures.

Laboratory Fee: $15.00 per semester.

SC 419 Pharmacology w/Lab.
Credit, 4 semester hours.

Prerequisites: SC 122 and SC 132; or SC 251-252; SC 362 or CH 302.
Science of medicinals and other chemicals and their effects produced by use and abuse on living organisms, the mechanisms whereby these effects are produced. Relation of structure to activity methods of assay, and metabolic pathways involved.

Laboratory Fee: $15.00.

SC 421 Toxicology w/Lab.
Credit, 4 semester hours.

Prerequisites: SC 122 and SC 132, or SC 251-252; SC 362.
The action of chemicals, particularly poisons, on living organisms. Relation of structure to activity, mechanisms of detoxication (in vivo), and reason for activity studied. Methods of isolation, identification and characterization from tissues, toxic limits, methods of assay, types of antidotes used.

Laboratory Fee: $15.00.

SC 424 Psychobiology.
Credit, 3 semester hours.

Prerequisites: P 111, SC 122 or 123, SC 132, and CH 106.
A study of the biological factors of behavior, with concepts drawn from numerous related disciplines, such as physiology, pharmacology, ethnology, ecology, anthropology, psychology, and biochemistry. One of the more recent advances in this field is that of the environmental impact on behavior patterns.

SC 461-462 Advanced Biochemistry.
Credit, 6 semester hours.

Prerequisite: SC 362.
Enzymology and the more important metabolic pathways, including those of alkaloid synthesis.

SC 491-492 Seminar and Senior Thesis.
Credit, 2 semester hours.

Prerequisites: Biology major and completion of Biology core requirements.
Hourly weekly meetings during which prepared papers are read by members of the class. Each student, with his adviser, must select a topic which from library sources is developed into a "Library Thesis." The contents of this thesis must be defended before department faculty members.

SC 495-496 Research and Independent Study.
Credit, 2 to 8 semester hours.
Prerequisites: Biology major. By permission of the department.
Choice of a research topic, literature search, planning of experiments, experimentation, and correlation of results in a written report, und the guidance of a department faculty member.
Laboratory Fee: $15.00 per semest

SOCIOLOGY AND SOCIAL WELFARE

Faith H. Eikaas, Chairman

SO 113 Sociology.
Credit, 3 semester hours.
The role of culture in society, the person, and personality; groups and group behavior; institutions; social interaction and social change.

SO 114 Contemporary Social Problems.
Credit, 3 semester hours.
Prerequisite: SO 113.
The major problems which confront the present social order, and the methods now in practice or being considered for dealing with these problems.

SO 124 Political and Social Thought of the Third World.
Credit, 3 semester hours. (Same as PS 124)
The emergence of the Third World as a decisive force in world political, social, economic, and cultural thought.

SO 218 The Community.
Credit, 3 semester hours.
Prerequisite: SO 113.
The Community and its provision for health education, recreation, safety, and welfare—theoretical concepts of "Community" plus case studies of small scale human communities used to introduce students to fundamental concepts of "Community"—ethnographies will include studies of factories, hospitals, primitive villages, small towns, etc.

SO 221 Cultural Anthropology.
Credit, 3 semester hours.
A systematic survey of the customs of man found in preliterate societies as well as modern societies. A study of the evolution of culture and analyses of religion, economics, language, kinship, art, etc. as found in primitive and modern cultures.

SO 231 Juvenile Delinquency.
Credit, 3 semester hours. (See CJ 221)
Prerequisites: SO 113 and P 111.
A general orientation to the field of delinquency and crime, including all aspects of the social and personal matrix from which these forms of social destructiveness arise. An attempt is made to build up some consistent theory of causation in order to develop a suitable method of handling these problems.

SO 311 Criminology.
Credit, 3 semester hours. (See CJ 311)
Prerequisites: P 111 and SO 113.
Approaches to the study of crime, its treatment and prevention. The sociology of criminal law and the nature of criminal behavior; theories and research.

SO 312 Marriage and the Family.
Credit, 3 semester hours.
Prerequisite: SO 113.
The structure and function of the family in American Society: analysis of social relations within the institution. Factors contributing to its successful functioning, and those leading to alienation and social disorganization.

SO 315 Social Change.
Credit, 3 semester hours.
Prerequisite: SO 113.
Sources, patterns, and processes of social change with examination of classical and modern theories of major trends and developments as well as studies of perspectives on micro levels of change in modern society.

SO 318 Political Sociology.
Credit, 3 semester hours.
Prequisite: SO 113. (Offered even years, spring semester)
(Same as PS 318)
Concepts, theories, and basic issues in the sociological analysis of political systems, social factors in political attitudes and behavior with emphasis on understanding the functional and dysfunctional aspects of socio-political coordination and conflict.

SO 320 Social Psychology.
Credit, 3 semester hours. (See P 321)

Prerequisites: P 111 and SO 113.
The interdependence of social organizations and behavior. The interrelationships between role systems and personality; attitude analysis, development, and modification; group interaction analysis; social conformity; social class and human behavior.

SO 321 Social Stratification.
Credit, 3 semester hours.

Prerequisite: SO 113.
Organization of social class: status, power, and process of social mobility in contemporary society. Social stratification, its functions and dysfunctions, as it relates to the distribution of opportunity, privilege, and power in an industrial society.

SO 331 Population Problems and Human Ecology.
Credit, 3 semester hours.

Prerequisite: SO 113.
A sociological approach to social demography with attention given to population statistics found in U. S. Census reports and vital statistics reports. The quantitative patterns of distribution of population, and population changes and trends.

SO 400 Minority Group Relations.
Credit, 3 semester hours.

Prerequisites: SO 113.
An interdisciplinary survey of minority groups in this country with particular attention paid to those ethnic, religious, and racial factors that influence interaction. Designed to promote an understanding of sub-group cultures.

SO 410 Urban Sociology.
Credit, 3 semester hours.

Prerequisite: SO 113.
The problems of the cities. Residential patterns together with the physical development of cities and redevelopment plans. An examination of groups of people and their environment and the relationship between the two.

SO 411 Industrial Relations.
Credit, 3 semester hours. (See BA 231)

Prerequisite: BA 125 or permission of the instructor.
Human factors in the management function including union-management relations, history of human relations, individual and group productivity, the company, and the community.

SO 413 Foundations of Sociological Theory.
Credit, 3 semester hours.

Prerequisites: SO 113 and 6 additional hours in Sociology.
An analysis of the development of sociology in the nineteenth century with particular emphasis on the theories of Comte, Durkheim, Simmel, Weber, Marx, de Tocqueville, and others.

SO 418 Public Opinion and Social Pressure.
Credit, 3 semester hours. (Same as PS 418)

Prerequisites: SO 113, P 111 (offered even years, fall semester).
An intensive analysis of the nature and development of public opinion with particular consideration of the roles, both actual and potential, of communication and influence.

SO 440 Undergraduate Seminar.
Credit, 3 semester hours.

Prerequisite: 21 semester hours in Sociology.
Open to Sociology majors by special permission of the department chairman. A detailed examination of selected topics in the field of sociology and a critical analysis of pertinent theories with emphasis on modern social thought.

SO 450 Research Seminar.
Credit, 3 semester hours.

Prerequisites: P 301 or BA 216 Statistics. (Same as SW 450)
The student develops and carries out an original research project in social science, reporting his procedure to the class.

SO 599 Independent Study.
Credit, 1-3 semester hours per semester with a maximum of 12.

Prerequisites: Consent of faculty member and chairman of department.
Opportunity for the student under the direction of a faculty member to explore an area of interest to him. This course must be initiated by the student.

SOCIAL WELFARE CONCENTRATION

Peter T. Van Suetendael, Coordinator

The following courses, with the exception of SW 425, must be taken by all social work students in order to achieve recognition as a professional at the bachelor's degree level.

SW 220 Introduction to Social Welfare. Credit, 3 semester hours.

Prerequisite: SO 113.
Organizations in the community and the problems that they face. How these organizations developed, how they function, and how they utilize social workers. Ways of dealing with community problems. Field trips to organizations serving the New Haven area. Basic observational skills will also be taught.

SW 340 Human Dynamics. Credit, 3 semester hours.

Prerequisite: SO 113.
Phases of psychosexual development, together with the problems that develop in each stage. The psychosocial history and its interpretation. Group dynamics and the meaning of group interaction.

SW 350-351 Social Welfare as a Social Institution I and II. Credit, 6 semester hours.

Prerequisite: SW 220. Credit for one semester only with permission of Coordinator.
The relationships between the present social welfare system and the socio-economic and political systems of the United States. The history of the concepts of social welfare, the current programs, policies, and issues.

SW 401-402 Field Instruction I and II. Credit, 6 semester hours.

Registration only by permission of the Coordinator of Social Services. Prerequisite or concurrent: SW 415-416. Credit for one semester only with permission of Coordinator.
Direct service activities in a social work agency in the community to further the development of the skills needed for the practice of social work. Field instruction is individually planned with each student. Seminars in conjunction with the field work experience provide an opportunity for an understanding of group and individual dynamics.

SW 415-416 Methods of Intervention I and II. Credit, 6 semester hours.

Prerequisites: SW 350-351.
The skills needed for the practice of social work. How to approach a situation in a professional manner. How to understand a situation, set goals, and initiate and carry out a program to meet these goals. Case records are studied to familiarize the student with real life situations in which to apply the methods of intervention. Through role playing the students will develop their skill in talking to and listening to others. Emphatic ability is developed.

SW 425 (elective) Race Relations. Credit, 3 semester hours.

Prerequisite: SW 215.
The student begins to deal with his own attitudes towards minority groups. He is helped to understand these attitudes and then to work with them in a program of reading and activity in the University and community.

SW 450 Research Seminar. Credit, 3 semester hours. (Same as SO 450)

Prerequisites: P 301 or BA 216 Statistics.
The student develops and carries out an original research project in social science, reporting his procedure to the class.

SW 475 Issues in Social Work. Credit, 3 semester hours.

Prerequisite: SW 401.
Students explore their views on the role of social work in today's society, the ethical considerations faced by the profession, and the students' place in the profession and in society.

SW 599 Independent Study. Credit, 1-3 semester hours per semester with a maximum of 12.

Prerequisites: Consent of faculty member and chairman of department.
Opportunity for the student under the direction of a faculty member to explore an area of interest to him. This course must be initiated by the student.

THEATER ARTS John Collinson, Coordinator

T 131-132 Introduction to the Theater.
Credit, 6 semester hours.

Using the theater resources of the New Haven area, students will study topics such as playwriting, directing, acting, set design, dramatic criticism. Students must pay theater admissions.

T 141-142 World Drama and Theater.
Credit, 6 semester hours.

Dramatic literature from classical times to the present, considered in its contemporary theatrical setting.

T 341-342 Acting and Directing.
Credit, 6 semester hours.

Exercises in acting and directing, moving from the elementary to the complex. Emphasis on acting during the first semester and directing during the second. The student may participate in major workshop productions.

T 491-492 Theater Arts Seminar.
Credit, 6 semester hours.

Prerequisites: T 131-132, T 141-142, T 341-342 or Instructor's consent. Independent study in special areas of drama: theater history, dramatic literature, criticism, playwriting, directing, acting.

T 599 Independent Study.
Credit, 1-3 semester hours per semester with a maximum of 12.

Prerequisites: Consent of faculty member and chairman of department. Opportunity for the student under the direction of a faculty member to explore an area of interest to him. This course must be initiated by the student.

THE BOARD OF GOVERNORS

NORMAN I. BOTWINIK, Chairman
President, Botwinik Brothers, Inc.

ROBERT M. GORDON, Vice Chairman
President, The Milford Rivet & Machine Company

GEORGE R. TIERNAN, Secretary
Attorney at Law

CHARLES E. WOODS, Treasurer
President of the Alumni Association

HUBERT C. HODGE, Assistant Secretary
President, American Buckle Company

JAMES Q. BENSEN, Assistant Treasurer
Resident Manager, Bethlehem Steel Corporation

HAROLD G. ANDERSON
The Southern Connecticut Gas Company

JOSEPH J. ARNOLD
Associate Professor, University of New Haven

GARY BIANCHI
Day Student, University of New Haven

ROLAND M. BIXLER
President, J-B-T Instruments, Inc.

MRS. KINGMAN BREWSTER, JR.

PETER H. COMSTOCK
Chairman of the Board and President, Pratt-Read Corporation

CHARLES H. COSTELLO
Chairman of the Board, C. Cowles & Co.

ABBOTT H. DAVIS, JR.
Vice President—Marketing
The Southern New England Telephone Company

BIAGIO DiLIETO
Chief of Police, New Haven

ROBERT B. DODDS
Chairman of the Board, Safety Electrical Equipment Corporation

EDWARD J. DREW
Manager, Quinnipiack Club

RICHARD J. DREW, JR.
Day Student, University of New Haven

JOHN E. ECHLIN
Chairman of the Executive Committee
Echlin Manufacturing Company

STUART W. FINLAY
Formerly, Shearson, Hammill & Co., Inc.

FREDERICK F. FISCHER,
Certified Public Accountant

AUSTIN T. FORD, JR.
Evening Student, University of New Haven

ELLIOT GANT
Executive Vice President, Gant Shirtmakers, Inc.

NATHAN HAMILTON
Attorney at Law

JOHN M. HEATH
Adjunct Professor, University of New Haven

ROBERT T. HOWLING
Professor, University of New Haven

MICHAEL J. JACKSON
Day Student, University of New Haven

THE BOARD OF GOVERNORS

ELLIS C. MAXCY
Formerly, President
The Southern New England Telephone Company

ALAN J. McBEAN
Secretary and Treasurer
The Southern New England Telephone Company

ROBERT I. METCALF
Formerly, Vice President—Public Affairs, Olin Corporation

GEORGE I. MORDECAI
The Southern New England Telephone Company

JOHN PERUN
Alumni Representative

MARVIN K. PETERSON
President of the University

J. COY REID
Formerly, Chairman of the Board and Chief Executive Officer
The First New Haven National Bank

MRS. WILLIAM F. ROBINSON, SR.

MRS. GLORIA SCHAFFER
Secretary of the State

DONALD L. SHERMAN
General Executive, YMCA of New Haven

MRS. SUSAN SMALL
Evening Student, University of New Haven

BULKELEY SMITH
Formerly, President of the Manufacturers Division
New Haven Chamber of Commerce

LEON J. TALALAY
General Manager, B. F. Goodrich Sponge Products Division

MRS. F. MORGAN TAYLOR, JR.

FELIX ZWEIG
Professor of Engineering and Applied Science, Yale University

STANDING COMMITTEES OF THE BOARD OF GOVERNORS

Executive Mr. Botwinik, Chairman; Mr. Gordon, Vice Chairman; Messrs. Bensen, Davis, Dodds, Hodge, Metcalf, Peterson, Tiernan, Woods.

Finance Mr. Woods, Chairman; Mr. Bensen, Vice Chairman; Messrs. Dodds, Echlin, Fischer.

Nominating Mr. Metcalf, Chairman; Mr. Reid, Vice Chairman; Messrs. Costello, Gant, Mrs. Robinson

Personnel Mr. Metcalf, Chairman; Mr. Talalay, Vice Chairman; Messrs. DiLieto, Finlay, Sherman.

SPECIAL COMMITTEES OF THE BOARD OF GOVERNORS

Board Function and Communications Mr. Maxcy, Vice Chairman; Messrs. Bianchi, Costello, Gordon, Sherman.

Building and Grounds Mr. Botwinik, Chairman; Mr. Talalay, Vice Chairman; Messrs. Anderson, E. Drew, Ford, Hodge, Jackson, Mordecai, Perun, Smith, Zweig.

Development Mr. Bixler, Chairman; Mr. Maxcy, Vice Chairman; Messrs. Arnold, Davis, R. Drew, Echlin, Ford, Heath, Howling, Jackson, Perun, Mrs. Schaffer, Mrs. Small, Messrs. Talalay, Zweig.

Fund Raising Mr. Bensen, Chairman; Messrs. Bixler, Comstock, Dodds, Echlin, Finlay, Mordecai, Talalay.

Public and Industrial Relations Mr. Davis, Chairman; Anderson, Vice Chairman; Messrs. Comstock, R. Drew, DiLieto, Gant, Hamilton, Mrs. Robinson.

STANDING COMMITTEES

Academic Council Dr. Kaplan, Chairman

Academic Standing and Admissions Mr. Robertson, Chairman

Board of Athletic Control Dr. Van Suetendael, Chairman

Board of Security Control Mr. Villa, Chairman

Committee on Internal Affairs Mr. Peterson, Chairman

Deans' Council Dr. Kaplan, Chairman

Development Committee Mr. Peterson, Chairman

Faculty Senate Mr. Hofmann, Chairman

Library Mr. Baker, Chairman

Personnel Policy Mr. Shattuck, Chairman

Student Aid and Services Mr. Ghoreyeb, Chairman

ADMINISTRATION

Office of President

MARVIN K. PETERSON, B.S. in Econ., M.Ed., L.H.D., President
DALEN BOWLES, Secretary

Office of Provost and Vice President for Academic Affairs

PHILLIP S. KAPLAN, B.A., M.A., Ph.D., Provost and Vice President for Academic Affairs
MARION I. DePALMA, Secretary
MARY MENTO, Secretary

ADMINISTRATION — ACADEMIC

ACADEMIC DIVISIONS

School of Arts and Sciences

JOHN COLLINSON, A.B., A.M., Ph.D., Dean, Acting Chairman of Humanities
DAVID BROWN, B.S., M.A., Chairman—Psychology
KEE W. CHUN, A.B., A.M., Ph.D., Chairman—Physics
CAROLINE DINEGAR, B.A., M.A., Ph.D., Chairman—Political Science
FAITH H. EIKAAS, B.A., M.A., Ph.D., Chairman—Sociology
JOSEPH M. GANGLER, B.S., M.A., Ph.D., Acting Chairman—Mathematics
THOMAS KATSAROS, B.A., M.A., M.B.A., Ph.D., Chairman—History
ELIAS J. McDUFFIE, JR., B.S., Coordinator of Transitional Studies
WILLIAM H. NYCE, B.A., M.S., Chairman—Chemistry
PHILIP OLGIN, B.S., Ed.M., Ed.D., Director of Teacher Education
DOUGLAS ROBILLARD, B.S., M.A., Ph.D., Chairman—English
PETER VAN SUETENDAEL, B.S., M.S., Ed.D., Coordinator of Social Services
H. FESSENDEN WRIGHT, A.B., M.S., Ph.D., Chairman—Science and Biology
EDNA PAUL, Secretary
LOIS ANDERSON, Faculty Secretary
MARGARET BERTOLINI, Faculty Secretary
VIOLA DUNNIGAN, Faculty Secretary
LUCILLE FACCADIO, Faculty Secretary
*BARBARA JOHNSON, Secretary
GENEVIEVE LYSAK, Faculty Secretary
*BARBARA McGILL, Faculty Secretary
IRENE NORTH, Faculty Secretary
*JULIE WOOD, Faculty Secretary
*LOUISE ALLEN, Secretarial Assistant

ADMINISTRATION — ACADEMIC

School of Business Administration

WARREN SMITH, B.A., M.B.A., Dean
WARD THEILMAN, B.A., Ph.D., Chairman—Business Administration
HOWARD FIDLER, B.S., M.B.A., Chairman—Hotel Administration
JEFFREY L. WILLIAMS, B.S., M.B.A., Chairman—Accounting
JOSEPH A. PARKER, B.A., M.A., Ph.D., Acting Chairman—Public Administration
FRANKLIN B. SHERWOOD, B.A., M.A., Ph.D., Chairman—Economics
KATHLEEN ALLARD, Secretary
LOIS ANDERSON, Faculty Secretary
COLLETTE FOLEY, Secretary

School of Engineering

THOMAS C. WARNER, JR., B.E., M.S., Dean
FRANCIS J. COSTELLO, B.S., M.S., Chairman—Industrial Engineering
JOHN D. DRISCOLL, B.S., B.E.E., M.S., Chairman—Electrical Engineering
RICHARD J. GREET, B.E.E., M.S., Ph.D., Coordinator—Materials Engineering
JOHN C. MARTIN, B.E., M.E., Chairman—Civil Engineering
HARRY H. STEINHAUSER, JR., B.S.E., Ch.E., Ph.D., Chairman—Mechanical Engineering
VIOLA DUNNIGAN, Secretary
IRENE ASPRELLI, Faculty Secretary
MARGARET BERTOLINI, Faculty Secretary
*ANN MASSINI, Faculty Secretary

Division of Criminal Justice

L. CRAIG PARKER, JR., A.B., M.Ed., Ph.D., Director
JOHN R. CONWAY, B.S., M.P.A., Academic Coordinator
RITA NEFF, A.S., Secretary

Graduate School

JOSEPH A. PARKER, B.A., M.A., Ph.D., Dean
ALEXIS N. SOMMERS, B.M.E., M.S., Ph.D., Associate Dean
GEORGE A. SCHAEFER, B.S., M.B.A., Associate Dean for Administration
KAY ALLARD
*GERALDINE DORMAN, Secretarial Assistant
*VIRGINIA KLUMP, Recorder
*GERTRUDE MacINTYRE, Secretarial Assistant

Continuing Education

RICHARD M. LIPP, B.S., Director
DAVID WILSON, B.S., Assistant Director
MURIEL MacKAY, Continuing Education Registrar
MARY ANN MIKOSKY, A.S., Secretary
*MARY BURLINSON, Secretary-Receptionist
*NANCY BURT, Secretary-Receptionist
*DELMA HUEFFMAN, Admissions Secretary
*FLORENCE POPPENDICK, Registration Secretary

Management Center

CHARLES L. WESOLOWSKY, B.S., M.A., Director
*ANN CALLAHAN, Secretary

Special Studies

VIRGINIA M. PARKER, A.B., Director
SARA HADDAD, Secretary

Office of Academic Development

ALLEN C. HUTCHINSON, A.B., M.A., Ph.D., Director
MARION I. DePALMA, Secretary

ADMINISTRATION — STUDENT AFFAIRS

STUDENT AFFAIRS

Office of Dean

JOHN W. GHOREYEB, B.A., M.A., Dean
THOMAS J. MASSE, B.S., M.S., Assistant to the Dean
DOROTHY I. LEVITSKY, Secretary

Black Student Affairs

WILLIE C. BONDS, B.S., Director
*BARBARA JOHNSON, Secretary

Counseling and Health

JAMES J. FANNING, B.S., M.A., Director
G. BRUCE MUNRO, B.A., M.S., Counselor
*ALAN R. FEIRSTEIN, Ph.D., Consulting Psychologist
*MARC D. SCHWARTZ, M.D., Psychiatrist
MARIANNE G. SAWHILL, Secretary
JON M. FESSEL, M.D., University Physician
IDA CUZZOCREO, R.N., Head University Nurse
*AGNES QUINN, R.N., University Nurse

Financial Aid

DAVID DuBUISSON, B.A., Director
JOSEPH P. MACIONUS, B.S., Assistant Director
EVELYN SHERWOOD, Secretary

Housing

PHILIP S. ROBERTSON, B.A., Director
*PAULINE DRURY, Secretary

Placement

NICHOLAS A. BRUNETTI, B.S., Director
LUCILLE E. EMERLING, Secretary

Chaplains

THE REVEREND ROBERT W. ANTHONY, Christ Church, West Haven
THE REVEREND JAMES GUNNOUD, Our Lady of Victory Church, West Haven
RABBI LEON MIRSKY, Congregation Sinai, Inc., West Haven

STUDENT RECORDS

Office of Director

Director: To be announced
HELEN PATRY, Secretary

Admissions

JOHN BENEVENTO, B.S., Director
CUSHMAN L. ROBERTSON, B.A., M.S., Admissions Officer
ROBERT A. CAMPBELL, B.A., M.A., Assistant Director
PETER A. ROGERS, B.S., Admissions Counselor
MARGARET SOBY, Selective Service Coordinator
HELEN PATRY, Secretary and Veterans Affairs Cordinator
*VERA CONROY, Secretary-Receptionist
JUDY MITCHELL, Secretary
ADELE OLIVI, Secretary
EVA WIDGER, Executive Secretary

Computer Center

FRANK A. S. ELLIOTT, B.S., Director
FRED A. MORGILLO, Assistant to Director
SALVATORE VOTTO, JR., A.S., Programmer
ROBERTA C. PECCERILLO, Secretary
AUDREY KUSHNER, Key Punch Operator
*ROBERT SCHUSTER, Computer Operator

Registration and Records

Registrar: To be announced
MARY BURDICK, Recorder
*HELEN CAREY, Secretary
*BEATRICE CORDONE, Secretary
MARY JOHNSON, Secretary
MARGERY PARROTT, Secretary
*MARGARET TUOHY, A.B., Secretary

Scheduling

EARL O. HAMEL, JR., A.B., Director
MARGARET SOBY, Secretary

ADMINISTRATION GENERAL

BUSINESS AND FINANCES

Business Office

OLGA GRIFFETH, A.B., Director and Secretary to University
JULIA HLYWA, Secretary
ROSE KING, Secretary
JOHN M. STANKIEWICZ, Finance Clerk
MARY WILLIAMS, B.A., Bursar
*MARY LOU DADDIO, Secretary
*CARMELA LUBENOW, Secretary
*FRANCES MacMILLAN, N.D.S. Loans

Controller's Office

FRANK G. HULL, B.S., Controller
*EI SIE CALANDRO, Secretary

Procurement, Buildings, and Grounds

RALPH D. BYARD, M.B.A., Director
HELEN ROTHFUSS, Secretary
ANN AVGERINOS, Clerical and Duplication
HARRY FLORENTINO, Supervisor of Maintenance
RENO MERCADO, Supervisor of Custodians

GENERAL UNIVERSITY

Audio Visual

BRUCE A. FRENCH, B.A., M.A., Coordinator
IRENE NORTH, Secretary

University Development, Alumni, and Institutional Research

LAWRENCE C. PARKER, A.B., M.A., Director
JANET SEYMOUR, Secretary

Intercollegiate Athletics

DONALD R. ORMROD, B.S., M.S., Director
ROBERT D. CORNELL, B.S., Director of Sports Information
MARIA DeLISE, Secretary
VIRGINIA RICCI, Secretary

Language Library

ROBERT WOODWORTH, B.A., Coordinator

Library

SAMUEL M. BAKER, JR., B.A., B.S., M.A., University Librarian
DOROTHY S. LOCKROW, B.A., M.A., Assistant University Librarian
RITA B. CONROY, Secretary to the University Librarian
ASA B. PIERATT, JR., B.A., M.A., Technical Services Librarian
LAROLA GAMBLE, Senior Acquisitions Assistant
BARBARA CAINE, Library Technician: Serials
ELIZABETH KUCHINSKI, Senior Catalog Assistant
ANNETTE GREENHOUSE, Library Technician: Cataloguing
MICHAEL R. DESIDERIO, B.A., M.L.S., Public Services Librarian
ANNE J. MORTON, B.A., M.A.L.S., Reference Librarian
*MARY ANNE SCULLY, Library Technician
CLAIRE CURTIN, Senior Circulation Assistant
JEANNE D. MARTIN, Library Technician: Circulation
PATRICIA J. TAYLOR, Library Technician: Circulation
*ROSE BRADLEY, Library Technician
EDITH LISSEY, Library Technician
*ALLENA T. MacDOUGALL, Library Technician
*MARIAN OTTAVIANO, Library Technician
*SHIRLEY SCHLENTHER, Library Technician

Personnel Office

JAMES H. SHATTUCK, B.S., B.A., Director
GEORGIANNE DeMAIO, Secretary

Public Relations

LAWRENCE F. WILLARD, A.B., Director
HEINZ WOEHLK, B.A., Assistant to the Director
ELIZABETH T. BENNETT, Secretary

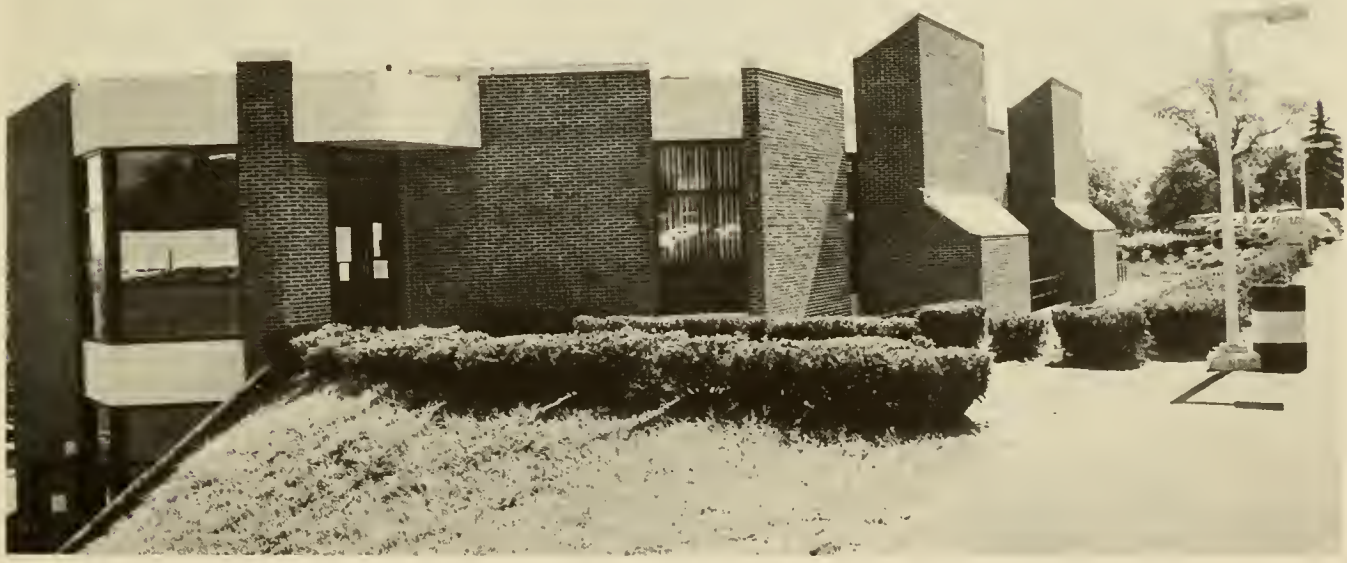
Security

RICHARD WILBER, A.S., B.S., Director
GENEVIEVE LYSAK, Secretary

Services

MARGARET BUCK, Receptionist
*LEWIS DORMAN, Mail
*ROSEMARIE GIANNOTTI, Clerical and Duplication
*JOHN REID, Mail
VIOLET SCHUSKY, Switchboard Operator
*HERMAN WIDIG, Mail
AUGUST VIEIRA, Locker Rooms
*YOLANDA VITELLI, Clerical and Duplication

*Indicates part-time



ALUMNI ADVISORY COUNCIL

CHARLES E. WOODS, '51, Chairman
President
New Haven Water Company
New Haven, Connecticut

PHILIP RICCIARDI, '40, Vice Chairman
Partner
The Shelton Company
West Haven, Connecticut

LAWRENCE C. PARKER, Secretary
Director of Alumni Relations
University of New Haven

GEORGE J. CONKLING, '35
Retired

FREDERICK L. CRONAN, '39
Purchasing Agent
City of New Haven, Connecticut

JOSEPH F. DUPLINSKY, '41
President
Connecticut Blue Cross, Inc.
New Haven, Connecticut

JOHN N. DEMING, '48
Directory Manager—Business Information Systems
The Southern New England Telephone Co.

STANLEY F. DURFEE, '35
Secretary
Charles S. Leete Company, Inc.
New Haven, Connecticut

LESLIE C. FINDELL, '51
General Manager
Wilson Auto Sales Company, Inc.
Branford, Connecticut

JOHN A. FREY, '44
President and General Manager
Hershey Metal Products, Inc.
Ansonia, Conn.

HERMAN I. GALVIN, '34
Partner
Axton-Cross Company
North Haven, Connecticut

WALTER P. MACAULEY, '37
Vice President
Wyatt, Incorporated
New Haven, Connecticut

GEORGE I. MORDECAI, '35
Senior Engineer
The Southern New England Telephone Co.

JOHN PERUN, '62
Alumni Rep. to Board of Governors
University of New Haven

MARVIN K. PETERSON
President
University of New Haven

THOMAS B. PETERSON, '52
Vice President and Controller
Connecticut Hard Rubber Company
New Haven, Connecticut

THOMAS G. PISCITELLI, '52
Assistant Treasurer and Hamden Branch Manager
Union Trust Company
New Haven, Connecticut

ARTHUR J. ROETTING, '36
President
Wire Machinery Corp. of America, Inc.
New Haven, Connecticut

EUGENE J. ROSAZZA, '39
Vice President, Finance & Accounting
The United Illuminating Company
New Haven, Connecticut

EDWARD D. TADDEI, '46
Executive Vice President
Barrows and Wallace Company
Hartford, Connecticut

STEPHEN D. WAYNE, '48
President
The Strouse-Adler Company
New Haven, Connecticut

FRANK H. WOODMAN, '47
Vice President
The H. B. Ives Company
New Haven, Connecticut

ENGINEERING ADVISORY COUNCIL

JACK F. WEIFFENBACH, Chairman
Vice President, Research and Engineering
Olin Corporation
New Haven, Connecticut

FRANCIS J. COSTELLO, Secretary
Chairman
Department of Industrial Engineering
University of New Haven

JOHN L. BANKS
Senior Staff Engineer
Avco-Lycoming
Stratford, Connecticut

JORN BERG-JOHNSEN, JR.
Sales Engineer
Godfrey & Associates
Hamden, Connecticut

SAMUEL S. BOARD, JR.
Engineer, Research and Development
Farrel Corporation Division U.S.M.
Derby, Connecticut

JOHN D. COTRONE
Assistant Manager
Pratt & Whitney Aircraft Division
United Aircraft Corporation
North Haven, Connecticut

HUGH COX
Vice President-General Manager
Raymond Engineering
Middletown, Connecticut

ROBERT O. DISQUE
Chief Engineer
American Institute of Steel Construction, Inc.
New York, New York

The purpose of the Engineering Advisory Council is to act in an advisory and consultative capacity to the Engineering Departments of the University.

JOHN D. DRISCOLL
Chairman
Department of Electrical Engineering
University of New Haven

CLARENCE W. DUNHAM
Assoc. Prof., Civil Engineering Emeritus
Yale University
New Haven, Connecticut

DONALD EISENBERG
Engineering Manager
Burndy Corporation
Norwalk, Connecticut

FRANK GEISSLER
Engineering Manager
Cramer Div. of Conrac
Old Saybrook, Connecticut

RICHARD J. GREET
Coordinator
Department of Mechanical Engineering
University of New Haven

LAWRENCE B. GREW
Engineering Manager—Facilities
The Southern New England Telephone Co.
New Haven, Connecticut

EMIL ORAVEC
Vice President-General Manager
International Division MB Electronics
New Haven, Connecticut

R. J. OTTENHEIMER
Director, Engineering
Armstrong Rubber Company
New Haven, Connecticut

JOHN SALOMON
Superintendent of Production
United Illuminating Company
New Haven, Connecticut

HOWARD SAWATZKI
Vice President
Bigelow Superior Industries, Inc.
New Haven, Connecticut

NORBERT E. SMYTH
Manager of Nuclear Engineering Analysis
Electric Boat Division of General Dynamics
Groton, Connecticut

ALEXIS N. SOMMERS
Associate Dean
Graduate School
University of New Haven

RALPH A. SPANG
City Engineer
City of West Haven, Connecticut

HARRY H. STEINHAUSER, JR.
Chairman
Department of Mechanical Engineering
University of New Haven

ENGINEERING ADVISORY COUNCIL — con't

HERBERT HALL
Director Engineering
Chesebrough-Ponds, Inc.
Clinton, Connecticut

EBEN B. HASKELL
Executive Director
Connecticut Research Center
Wallingford, Connecticut

ROBERT F. HASLER
Chief Engineer
American Cyanamid Co.
Wallingford, Connecticut

ROBERT L. LONG
Manager—Engineering
Miles Laboratories, Inc.
West Haven, Connecticut

G. VINCENT MACONI
Secretary-Treasurer
Maconi Construction Company
Hamden, Connecticut

JOHN C. MARTIN
Chairman
Department of Civil Engineering
University of New Haven

GEORGE A. MEINSEN
Manager, Industrial Engineering
International Silver Company
Meriden, Connecticut

KENNETH E. NEFF
Vice President
Westcott and Mapes
New Haven, Connecticut

RUSSELL G. WARNER, JR.
Manager of Manufacturing
C. Cowles & Company
New Haven, Connecticut

THOMAS C. WARNER, JR.
Dean
School of Engineering
University of New Haven

FELIX ZWEIG
Professor of Engineering and Applied Science
Yale University
New Haven, Connecticut

MANAGEMENT CENTER ADVISORY COUNCIL

GEOFFREY ETHERINGTON, Chairman
Vice President, Heat Transfer Group
Allen Electric & Equipment Company
New Haven, Connecticut

EUGENE R. CALISTRO
Personnel Relations Manager
The Mite Corporation
New Haven, Connecticut

DAVID S. CLARKE
President
The Naugatuck Valley Industrial Council, Inc.
Waterbury, Connecticut

WALTER J. COLEMAN
Manager of Industrial and Community Affairs
New Haven Chamber of Commerce
New Haven, Connecticut

THOMAS E. GUNNOUD, JR.
Personnel and Training Administrator
The Anaconda American Brass Company
Waterbury, Connecticut

W. LAWRENCE HEALY, JR.
Supervisor of Training and Organizational Development
Naval Product Division
United Nuclear Corporation
New Haven, Connecticut

ALLEN C. HUTCHINSON
Director of Academic Development
University of New Haven

ROBERT J. McCAW
Plant Manager
The American Cyanamid Company
Wallingford, Connecticut

WILLIAM J. McGONAGIL
General Manager
Joseph T. Ryerson and Son, Inc.
Wallingford, Connecticut

THOMAS R. NOLAN
Vice President
Uni/Search
Danbury, Connecticut

EDWARD A. NUNN
Personnel Development Manager
UniRoyal Chemical
Division of UniRoyal, Inc.
Naugatuck, Connecticut

JOSEPH J. PALKER
Director of Personnel Planning
The Torrington Company
Torrington, Connecticut

DUANE M. PHILLIPS
Personnel Manager
The United Illuminating Company
New Haven, Connecticut

ROBERT W. STOUGHTON
Personnel Supervisor
B. F. Goodrich Sponge Products
Division of B. F. Goodrich Company
Shelton, Connecticut

CHARLES L. WESOLOWSKY, Secretary
Director
Management Center
University of New Haven

PUBLIC ADMINISTRATION ADVISORY COUNCIL

JOSEPH A. PARKER, Secretary
Dean
Graduate School
University of New Haven

MRS. KATHERINE BOURN
Vice Chairman
Board of Trustees of Regional Community Colleges
Manchester, Connecticut
Chairman

JAMES COLLETT, Chairman
Connecticut Development Commission
Hamden, Connecticut
Area Development Consultant
United Illuminating Company

JAY M. ETLINGER
Department of Public Administration
University of New Haven

JOEL L. FLEISHMAN
Associate Provost for Urban Studies and Programs
Yale University
New Haven, Connecticut

ROBERT H. FRANKLIN
Executive Director
Connecticut Public Expenditure Council, Inc.
Hartford, Connecticut

PHILLIP S. KAPLAN
Provost and Vice President for Academic Affairs
University of New Haven

FRANCIS J. KELLY
Controller
City of New Haven
New Haven, Connecticut

JOSEPH I. LIEBERMAN
Attorney
State Senator 11th District
Assistant to Dean
School of Architecture and Planning—Yale University
New Haven, Connecticut

JUSTIN F. MANNING
Chairman
New Haven Central Labor Council
Education Committee
Office and Professional Employeess International Union
American Federation of Labor and Congress of Industrial Organizations and Canadian Labor Congress
West Haven, Connecticut

NATHANIEL W. MORROW
Member, Personnel Policy Board
State of Connecticut
New Britain, Conunecticut

SAMUEL W. PINE
Raymond, Parish and Pine, Inc.
Urban Planners
West Haven, Connecticut

WILLIAM J. REYNOLDS
Vice President
Municipal Finance Department
Hartford National Bank and Trust Company
Hartford, Connecticut

BELDEN H. SCHAFFER
Director
The Institue of Public Service
University of Connecticut
Storrs, Connecticut

EDWARD SIMPSON
Personnel Commissioner
State of Connecticut
Hartford, Connecticut

JOHN WEICHSEL
Town Manager, Southington, Connecticut
President, Town and City Manager's Association
Southington, Connecticut

SOCIAL WELFARE ADVISORY COUNCIL

PETER T. VAN SUETENDAEL, Secretary
Coordinator
Social Welfare Concentration
University of New Haven

JOHN COLLINSON
Dean, School of Arts and Sciences
University of New Haven

STEPHEN DWORKEN
Mental Health Planner
Regional Mental Health Planning Council Inc.

MRS. CLAIRE GALLANT
State Department of Education
High Meadows
Hamden, Connecticut

HAYWOOD HOOKS
Human Relations Council
West Haven, Connecticut

ALLEN C. HUTCHINSON
Director
Office of Academic Development
University of New Haven

HERMAN H. LEVY
Attorney at Law
New Haven, Connecticut

WILLIAM LEWIS
United Rubber Workers, Local 93
West Haven, Connecticut

MRS. VIRGINIA LITTLE, A.C.S.W.
Chairman of Committee on Undergraduate Education
University of Connecticut
School of Social Work
West Hartford, Connecticut

HARVEY MIDDLETON
West Haven School System
West Haven, Connecticut

MRS. EVELYN REILLY
St. Louis Guild
West Haven, Connecticut

DR. GARY TISCHLER
Connecticut Mental Health Center
New Haven, Connecticut

Faculty Organization

General Committee:

Chairman of the Faculty	Ernest V. F. Hofmann
Secretary of the Faculty	Donald Wynschenk
Chairman, Board of Faculty Welfare	Gordon W. Preiss

Faculty Senate:

Chairman	Ernest V. F. Hofmann
Vice-Chairman	Robert T. Howling
Secretary	Donald Wynschenk
Chairmen of Senate Committees:	
Academic Standards	Robert T. Howling
Commencement and Convocations	Duncan M. Gage
Curriculum	Sheila A. Cowgill
Faculty-Student Relations	Donald Wynschenk
Instruction	John C. Martin
Non-academic Affairs	Louis Silbert

Board of Faculty Welfare:

Chairman	Gordon W. Preiss
Secretary	Richard A. Montague

FACULTY 1971 - 1972

Abramowitz, Stephen, Adjunct Lecturer, Psychology
B.A., Northwestern University; M.A., University of Colorado
Psychological Internship, Connecticut Valley Hospital

Albert, Eleanor, Adjunct Associate Professor, English
B.A., Barnard College; M.A., University of Pennsylvania

Alling, Roger D., Adjunct Assistant Professor, Business Administration
B.S., Yale University
C.P.A. (Conn.)

Amin-Mallak, Suheir, Assistant Professor, Business Administration
B.A., University of Damascus; M.B.A., Wharton School of Finance, Univ. of Penn.

Anderson, George, Adjunct Assistant Professor, Civil Engineering
B.E.M.E., M.E., Yale University
Olin Corp., Professional Engineer (Conn.)

Andrews, Norris, Adjunct Lecturer, Civil Engineering
B.Arch., M.C.P., Yale University

Andros, Philip K., Adjunct Lecturer, Electrical Engineering
B.S.E.E., New Haven College; M.S.E.E., University of Connecticut

Anisman, Martin J., Adjunct Lecturer, English
B.A., Syracuse University; M.A., Ph.D., New York University

Arnold, Joseph J., Associate Professor, Industrial Engineering
B.S., M.S., Southern Connecticut State College

Baer, Madeline, Adjunct Instructor, Science and Biology
B.A., Bryn Mawr College; M.A., Yale University

Baerman, Donald J., Adjunct Assistant Professor, Civil Engineering
B.A., Yale University
Davis, Cochran & Miller, Inc., President

Ball, Robert B., Assistant Professor, Economics
B.A., Southern Methodist University; M.A., Tulane University

Baruah, Armit, Adjunct Assistant Professor, Sociology
M.P.A., Harvard; M.S.W., Boston University

Beeken, Ramona, Assistant Professor, English
B.S., Southern Connecticut State College; M.A., Trinity College

Bell, Srilekha, Instructor, English
B.A., M.A., University of Madras; M.A., Ph.D., University of Wisconsin

Berg, Joseph, Adjunct Lecturer, Industrial Engineering
B.S., Union College
American Cyanamid Company, Wallingford

Bernardo, Robert, Adjunct Lecturer, Electrical Engineering
B.S.E.E., University of Massachusetts; M.S.E.E., New York University

Blake, John, Adjunct Assistant Professor, Business Administration
B.S., University of Connecticut; M.B.A., University of Bridgeport

Blaskey, Joel W., Adjunct Instructor, Science and Biology
B.A., Southern Connecticut State College

*__Boak, Irwin S.,__ Associate Professor, Physics
B.S., Hobart College; M.A., New York State University

Boivin, Joseph J., Adjunct Lecturer, Mechanical Engineering
A.S., Maine Vocational Technical Institute, Portland, Maine
United Nuclear Corporation

Briechle, Robert L., Adjunct Assistant Professor, Industrial Engineering
B.S.E.E., University of Connecticut; M.S., Rensselaer Polytechnic Institute
Sikorsky Aircraft Division, United Aircraft Corporation

Brigham, Robert N., Adjunct Lecturer, Electrical Engineering
B.S.E.E., Cornell University

Brown, David, Professor, Psychology
B.S., University of Connecticut; M.A., Columbia University
Consulting Psychologist (Licensed, Conn.)

Budrow, Russell B., Adjunct Assistant Professor, Physics
B.E.E., Rensselaer Polytechnic Institute
The Kerite Company, Seymour

Burns, Donald, Assistant Professor, Physical Education
B.S., University of Connecticut; M.A., Teachers' College, Columbia University

Burow, Dietrich, Adjunct Lecturer, English
B.A., University of Koln, Germany; M.A., University of Frieburg, Germany

Burt, William J., Adjunct Assistant Professor, Business Administration
B.S., University of Connecticut; M.B.A., University of Bridgeport

Butun, Hilmi, Adjunct Assistant Professor, Civil Engineering
B.S., Robert College, Istanbul, Turkey; M.S., University of Michigan
Senior Engineer, Associated Engineering, New Haven

*Retired, February, 1972

Cannavaciolo, Alphonse D., Assistant Professor, Mathematics
B.S., Central Connecticut State College; M.A., University of Connecticut; M.A., Wesleyan University

Capra, Paul, Adjunct Lecturer, Political Science
B.A., Yale University; Dip. Theology, Oxford University; B.D., Yale Divinity; M.S., Southern Connecticut State College

Carriuolo, Ralf E., Assistant Professor, Humanities
B.A., Yale University; M.M., Hartt College

Carson, George R., Adjunct Assistant Professor, Civil Engineering
B.C.E., City College, New York; M.S.C.E., Columbia University
Goodkind & O'Dea, Consulting Engineers, Professional Engineer (Conn.)

Caruso, Mario A., Adjunct Assistant Professor, Business Administration
B.S., University of Connecticut
C.P.A. (Conn.)

Celotto, William F., Adjunct Professor, Civil Engineering
B.S.E., M.S., University of Connecticut
Professional Engineer (Conn.)
Sikorsky Aircraft Division, United Aircraft Corp.

Chandra, Satish, Assistant Professor, Business Administration
B.A., University of Delhi; M.A., Delhi School of Economics; LL.B., Lucknow Law School, India; LL.M., J.S.D., Yale University

Chardiet, Armando, Adjunct Professor, History
B.A., Dartmouth College; Doctor of Law and Advanced Study, University of Havana
Professor, Southern Connecticut State College

Chepaitis, Elia, Adjunct Instructor, History
A.B., Manhattanville College; M.A., Georgetown University

Chepaitis, Joseph, Assistant Professor, History
A.B., Loyola College; M.A., Ph.D., Georgetown University

Cherman, Herman R., Adjunct Associate Professor, Sociology
B.A., M.A., Yale University

Chun, Kee W., Professor, Physics
A.B., University of Pennsylvania; A.M., Princeton University; Ph.D., University of Pennsylvania

Ciarlone, Richard, Adjunct Assistant Professor, Business Administration, Graduate School
B.A., University of Connecticut; M.B.A., University of Maryland

Ciufecu, Aureliu, Adjunct Professor, English
L.H.B., Romanian College; Ph.D., State University of Rome

Ciulla, Robert K., Adjunct Assistant Professor, Political Science
B.A., Williams College; LL.B., Yale University
Attorney, Tyler, Cooper, Grant, Bowerman & Keefe

Clark, Benjamin, Adjunct Assistant Professor, Chemistry
B.S., University of Buffalo; Ph.D., Massachusetts Institute of Technology

Cleaver, David S., Assistant Professor, Economics
A.B., Oberlin College; M.S., University of Illinois

Clifford, Frank M., Instructor, Industrial Engineering
B.S., University of Bridgeport

Codlin, Kenneth E., Adjunct Assistant Professor, Business Administration
B.A., Northwestern University; M.S., Carnegie Institute of Technology
Yale University

Cole, Carroll P., Assistant Professor, English
B.A., Principia College; M.A., The Johns Hopkins University; Ph.D., Yale University

Cole, William S., Adjunct Assistant Professor, Humanities
B.A., M.A., University of Pittsburgh

Collins, James W., Adjunct Associate Professor, Business Administration
B.A., Rider College; B.S., Quinnipiac College
C.P.A. (Conn.)

Collinson, John, Professor, Humanities
A.B., The Johns Hopkins University; A.M., Harvard University; Ph.D., The Johns Hopkins University

Conway, John R., Assistant Professor, Criminal Justice
B.S., New Haven College; M.P.A., New York University

Costello, Francis J., Associate Professor, Industrial Engineering
B.S., New Haven College; B.S.M.E., M.S.M.E., Newark College of Engineering

Courtney, Dennis, Assistant Professor, Psychology
M.A., Wayne State University; Ph.D., University of Ohio

Cowgill, Sheila A., Assistant Professor, Humanities
B.S., Brooklyn College; M.A., Yale University; M.A., Hunter College

Crapo, Paul B., Adjunct Lecturer, English
B.A., Trinity College; M.Ph., Yale University

Crisco, Joseph, Adjunct Assistant Professor, Economics
B.S., University of Connecticut

Crowley, James A., Jr., Adjunct Instructor, Criminal Justice
B.S., New Haven College

Cypress, Harold L., Adjunct Lecturer, Industrial Engineering, Graduate School
B.S.S.E., University of Florida

DeFrances, Leroy A., Adjunct Assistant Professor, Business Administration
B.S., Fordham University
C.P.A. (Conn.)
Law Partner, Kircaldie, Randall & McNab

Dehar, Allan J., Adjunct Assistant Professor, Civil Engineering
Architect, Environmental Design Group, New Haven

DeMatteo, Vincent, Adjunct Assistant Professor, Industrial Engineering
B.S.,Ch.E., University of Connecticut; M.B.A., New York University

Desio, Peter J., Associate Professor, Chemistry
B.S., Boston College; Ph.D., University of New Hampshire

Devaney, Earl J., Adjunct Assistant Professor, Business Administration
A.B., Holy Cross College; M.B.A., University of Massachusetts
Sales Manager, Sprague Electric Company

DiBenedetto, Alphonse, Adjunct Assistant Professor, Criminal Justice
B.S., L.L.B., Fordham University

Dineen, Denis, Adjunct Lecturer, Chemistry
B.S., University of London; M.S., Ph.D., University of East Anglia, England

Dinegar, Caroline, Professor, Political Science
B.A., Cornell University; M.A., Ph.D., Columbia University

Disque, Robert D., Adjunct Assistant Professor, Civil Engineering
B.S., Northwestern University; M.S., Drexel Institute of Technology
American Institute of Steel Construction, New York

Driscoll, John D., Associate Professor, Electrical Engineering
B.S., Trinity College; B.E.E., M.S., Rensselaer Polytechnic Institute

Dull, James, Adjunct Assistant Professor, Political Science
B.A., Wilkes College; M.A., University of Pennsylvania

Duran, Gloria, Adjunct Professor, English
B.A., Wellesley Colege; M.A., Columbia University Russian Institute; M.A., Yale University

Dziengielewski, Ben F., Adjunct Assistant Professor, Mathematics
A.B., University of Michigan; M.S., M.A., Eastern Connecticut State College

Effros, Charlotte, Adjunct Professor, English
B.A., Queens College; M.S., University of Bridgeport

Eikaas, Faith H., Associate Professor, Sociology
B.A., M.A., Ph.D., Syracuse University

Eisenman, Robert, Assistant Professor, Sociology
B.S., University of Southern California; M.P.H., University of California at Los Angeles

Eisner, Suzanne, Adjunct Lecturer, English
B.S., University of Wisconsin; M.A., Northwestern University

Elder, William A., Adjunct Assistant Professor, Business Administration
B.A., Boston College; M.B.A., University of Connecticut
The United Illuminating Company

Ellison, Jerome, Professor, English
B.A., University of Michigan; M.S., Southern Connecticut State College
(On leave of absence)

Emerson, Hugh N., Professor, Economics
A.B., The Johns Hopkins University; M.B.A., Ph.D., University of Pennsylvania

Emery, Leroy F., Instructor, English
B.A., M.A., B.D., Acadia University

Erickson, Bruce, Assistant Professor, Mathematics
B.A., Concordia College; M.A., Yale University

Eskola, Margaret, Adjunct Professor, English
A.B., Wheaton College; M.S., Central Connecticut State College

Etlinger, Jay M., Assistant Professor, Public Administration
B.S., University of Rochester; M.A., Syracuse University

Ferry, Joseph L., Adjunct Instructor, Physics
B.S., Fairfield University
Chief Engineer, Iris Division, Ovitron Corporation, Cheshire

Fischer, Frederick F., Adjunct Professor, Business Administration
B.S., Northeastern University
C.P.A. (Conn.)

Flaumenhaft, Frank, Instructor, Business Administration
B.S., University of Pennsylvania; M.B.A., New York University

Flynn, Charles L., Adjunct Assistant Professor, Business Administration
Ph.B., Providence College; LL.B., Georgetown University
Law partner, Kopkind and Flynn

Flynn, W. Paul, Adjunct Assistant Professor, Business Administration
B.A., Duke University; LL.B., Georgetown University
Law partner, Kopkind and Flynn

Foley, Richard G., Adjunct Lecturer, Sociology and Public Administration
B.S., Boston University; M.S., Case-Western Reserve

Foster, Karen, Adjunct Instructor, English
B.A., St. Olaf College

Freeman, Joseph L., Adjunct Lecturer, Humanities
B.A., Carson-Newman College; M.A., Emory University

French, Bruce A., Assistant Professor, English
B.A., University of Missouri; M.A., Western Reserve University; M.A., Middlebury College; M.A., Harvard University

Frieling, Gerald H., Adjunct Assistant Professor, Civil Engineering
B.S.C.E., University of Michigan
Former Transportation Consultant, Wilbur Smith and Associates

Gabriel, Donald F., Adjunct Associate Professor, Science and Biology
B.S., M.A., Fairfield University

Gage, Duncan M., Assistant Professor, Physics
A.B., University of Pennsylvania; M.S., Ph.D., University of Michigan

Gangler, Joseph M., Professor, Mathematics
B.S., University of Washington; M.A., Ph.D., Columbia University

Garcia-Abrines, Luis, Adjunct Instructor, English
B.A., Goya Institute, Madrid; M.A., University of Madrid

Garcia-Negron, Miguel, Assistant Professor, Mathematics
B.S., University of Puerto Rico; M.Phil., Yale University

Gardner, Joan A., Adjunct Lecturer, Humanities
B.F.A., M.F.A., University of Illinois

Garris, Russell, Adjunct Lecturer, Sociology
B.A., Queens College; M.S.W., University of Michigan

George, Edward T., Associate Professor, Industrial Engineering
B.S., M.S., Worcester Polytechnic Institute; D. Engr., Yale University

Ghoreyeb, John W., Adjunct Instructor, Psychology
B.A., Yale University; M.A., Columbia University

Gibble, Kenneth, Adjunct Assistant Professor, Civil Engineering
B.A.E., Pennsylvania State University

Gilstad, Gerald W., Adjunct Assistant Professor, Mechanical Engineering
B.S., U. S. Naval Academy; M.S., University of Minnesota
Electric Boat Division, General Dynamics Corporation

Goldberg, Bonnie K., Adjunct Lecturer, English
B.S., University of Pittsburgh; M.A., Southern Connecticut State College

Goluboff, Sydney J., Special Lecturer, English
A.B., Amherst College

Grady, William E., Adjunct Instructor, Materials Engineering
B.S., Notre Dame University

Granholm, Nels H., Adjunct Associate Professor, Science and Biology
B.A., University of Massachusetts; Ph.D., Iowa State University

Greenia, David, Adjunct Professor, Humanities
B.A., Washington and Lee University; M.Phil., Yale University

Greet, Richard J., Associate Professor, Materials Engineering
B.E.E., Rensselaer Polytechnic Institute; M.S., Ph.D., Harvard University

Grodzinsky, Stephen, Assistant Professor, Electrical Engineering
S.B., S.M., Massachusetts Institute of Technology; Ph.D., University of Illinois

Gulati, Bodh Raj, Adjunct Associate Professor, Business Administration
M.S., University of Illinois; Ph.D., University of Connecticut

Haberman, Ronald A., Assistant Professor, Industrial Engineering
B.S.A.E., Pennsylvania State University; M.S.O.R., Florida Institute of Technology

Hadjimichael, Olympia, Adjunct Assistant Professor, Psychology
B.A., Colby College; M.A., University of California

Hagman, Lynn W., Assistant Professor, English
B.A., Central Michigan University; M.A., Ph.D., University of Detroit

Hale, Graham, Assistant Professor, Physics
B.S., (Special) Physics, Ph.D. University College, London, England

Hamel, Earl O., Jr., Adjunct Instructor, Mathematics
A.B., Marietta College

Hamilton, Nathan W., Adjunct Assistant Professor, Business Administration
B.S., Villanova College; LL.B., Fordham University
Hamilton & Scott, Attorneys-at-Law

Hammond, Stella, Adjunct Instructor, Mathematics
B.S., Stanford University

Harpole, J. Marinda, Visiting Lecturer, English
A.B., Mount Holyoke College; A.M., Boston University

Headley, Oliver, Adjunct Assistant Professor, Economics
A.B., Colgate University; M.S., Cornell University

Heath, John M., Adjunct Professor, Mathematics
B.A., Wesleyan University; M.A., Yale University

Herder, John W., Adjunct Lecturer, Psychology
B.A., Rutgers University; M.A., Columbia University; Ph.D., New York University

Hertel, Eugene S., Adjunct Lecturer, Industrial Engineering, Graduate School
B.S., University of Rhode Island; M.S., North Carolina State University

Hiatt, Norman A., Adjunct Assistant Professor, Chemistry
B.S., Worcester Polytechnic Institute; Ph.D., Lowell Technological Institute
Uniroyal, Inc., Naugatuck

Hill, Joseph A., Adjunct Assistant Professor, Political Science
A.B., Boston College; J.D., New England School of Law

Hoffman, Henry H., Adjunct Associate Professor, Materials Engineering
B.S., Michigan Technological University
Research and Engineering Center, United Nuclear Corporation

Hofmann, Ernest V. F., Assistant Professor, Physics
B.S., Yale University; M.S., University of Bridgeport

Hollowell, David A., Adjunct Instructor, Industrial Engineering
B.S., Yale University

Hollowell, Dorothy M., Instructor, English
B.A., LeMoyne College; M.A., Atlanta University
(On leave of absence)

Holman, William G., Associate Professor, Business Administration
A.B., Western State College of Colorado; M.A., Columbia University
C.P.A. (New York)

Horning, Darrell W., Assistant Professor, Electrical Engineering
B.S.E.E., S.D. School of Mines; M.S.E.E., Ph.D., University of Illinois

Howland, Arthur H., Adjunct Instructor, Civil Engineering
Land Surveyor, Conn., Mass., Maine, N. H., New York
Professional Land Surveyor

Howling, Robert T., Professor, English
B.A., Rutgers University; M.A., New York University; Ph.D., Penn. State University

Hughes, Inge M., Adjunct Associate Professor, Science and Biology
A.B., Barnard College; A.M., Columbia University; Ph.D., University of Pennsylvania

Hunt, Leigh W., Adjunct Special Lecturer, Mechanical Engineering (Graphics)
Former Assistant Chief Draftsman, Safety Electrical Equipment Corporation

Hutchinson, Allen C., Professor, Economics
B.A., Bates College; M.A., Montclair State College; Ph.D., University of Texas

Hutchinson, Richard A., Adjunct Instructor, Economics
B.S., Miami University of Ohio

Hyman, Arnold, Assistant Professor, Psychology
B.A., M.A., Brooklyn College; M.S., City College of New York; Ph.D., University of Cincinnati

Inman, Marion W., Adjunct Instructor, Mathematics
B.S., St. Augustine's College

Jensen, Eleanor, Adjunct Instructor, Business Administration
B.S., M.S., Southern Connecticut State College

Jensen, Gwendolyn E., Assistant Professor, History
B.A., University of Hartford; M.A., Trinity College; Ph.D., University of Connecticut

Jensen, Oscar, Adjunct Lecturer, Electrical Engineering
B.S.E.E., University of Hartford; M.S.E.E., University of California

Jepson, Alan, Adjunct Assistant Professor, Political Science
A.A., B.S., Boston University
Former Mayor of Milford, Connecticut

Jeschke, Reuben, Adjunct Lecturer, Sociology
B.A., Wesleyan University; B.A., STM, Hartford Theological Seminary; Ph.D., Columbia University

Johnson, Anthony, Adjunct Instructor, Humanities
B.A., Pomona College

Johnson, Ruth A., Adjunct Assistant Professor, Science and Biology
A.B., Eastern Baptist College

Kalma, Dennis L., Assistant Professor, Science and Biology
B.A., Knox College; M.S., Ph.D., Yale University

Kalma, Susan, Adjunct Instructor, Science and Biology
B.A., Mt. Holyoke

Kaplan, Morton D., Adjunct Assistant Professor, Economics
B.S., LL.B., University of Connecticut
Hilcoff, Kaplan and Friedler, Attorneys

Kaplan, Nathaniel, Associate Professor, English
A.B., Randolph-Macon College; M.S., Southern Connecticut State College

Kaplan, Phillip S., Professor, Economics
B.A., University of Massachusetts; M.A., Columbia University; Ph.D., The Johns Hopkins University

Karatzas, George, Associate Professor, Economics
B.A., Manchester University; M.A., Ph.D., New York University

Katsaros, Thomas, Professor, History
B.A., M.A., M.B.A., Ph.D., New York University

Kelly, James P., Adjunct Instructor, Criminal Justice
A.S., B.S., University of New Haven
Captain, Youth Division, New Haven Police Department

Kelly, Lois, Adjunct Instructor, Physical Education
B.A., Southern Connecticut State College

Kendirli, Fatma, Adjunct Instructor, Mathematics
B.S., Robert College, Turkey; Dip. Ing., Darmstadt, Germany; M.S., Polytechnic Institute, Brooklyn

Kennedy, George W., Assistant Professor, History
B.A., M.A., Wesleyan University

Klender, Gerald J., Adjunct Instructor, Chemistry
B.A., University of Buffalo; Ph.D., Purdue University
Research Chemist, Uniroyal Chemical, Division of Uniroyal, Inc.

Knoble, John W., Adjunct Lecturer, English
B.A., Carleton University; B.D., Yale Divinity School

Krevolin, Diane, Adjunct Lecturer, English
B.S., M.A., Boston University

Kropp, Robert E., Adjunct Instructor, Business Administration
B.S., Florida State University; M.B.A., University of New Haven

Ladish, Joseph S., Adjunct Instructor, Science and Biology
B.S., Massachusetts Institute of Technology; M.S., M.Phil., Yale University

Lamberti, James T., Jr., Adjunct Lecturer, Industrial Engineering, Graduate School
B.S., B.A., University of Connecticut; M.S., Rutgers University

Lambrakis, Constantine C., Associate Professor, Mechanical Engineering
B.S.E.E., M.S.M.E., University of Bridgeport

Lanius, Ross M., Jr., Assistant Professor, Civil Engineering
B.S.C.E., University of Delaware; M.S.C.E., University of Connecticut
Professional Engineer (Conn.)

Lawlor, Bernard, Adjunct Instructor, Criminal Justice
B.S., New Haven College

Lawrence, David S., Adjunct Assistant Professor, Industrial Engineering, Graduate School
A.B., Syracuse University; M.A., University of Bridgeport

Lehman, Thomas J., Adjunct Associate Professor, Business Administration
B.B.A., City College of New York; M.B.A. New York University
Treasurer, Drazen Lumber Company

Lemaire, Henry, Associate Professor, Chemistry
S.B., Massachusetts Institute of Technology; Ph.D., California Institute of Technology

Lemkin, Alan, Adjunct Associate Professor, Business Administration
B.S., Quinnipiac College
C.P.A. (Conn.)
S. M. Finer and Company

Leonard, Ira, Adjunct Assistant Professor, Poltical Science
B.A., M.A., City College of New York; Ph.D., New York University

Lesser, Ruth E., Adjunct Lecturer, English
B.A., Queens College; M.A., Brown University

Levine, David Barton, Adjunct Lecturer, Psychology
B.A., Adelphi University; M.S., University of Bridgeport; M.S., Southern Connecticut State College

Levine, Lynn S., Adjunct Lecturer, Sociology
B.A., University of Wisconsin

Levy, Betty G., Adjunct Associate Professor, English
B.A., Brooklyn College; M.A., City College of New York

Liberatore, Gary, Instructor, Physical Education
B.S., University of New Haven

Linke, Anita S., Adjunct Lecturer, English
B.A., Fairleigh Dickinson University; M.A., Brown University

Lipiczky, Thomas, Adjunct Assistant Professor, Humanities
B.A., Manhattan School of Music

Lipp, Richard M., Adjunct Instructor, Business Administration
B.S., New Haven College

Liu, David H. F., Adjunct Lecturer, Industrial Engineering, Graduate School
B.S., Jadarpur University; M.S., Ph.D., University of Pennsylvania

Lobay, Ivan, Professor, Mechanical Engineering
Dipl. Ing., Institute of Technology, Brno, Czechosloakia; M.E., Central University of Venezuela
Professional Engineer (Conn.)

Loughlin, James, Adjunct Associate Professor, Economics, Graduate School
B.S., Fordham University; M.A., Ph.D., Clark University

Lucas, Jack, Adjunct Lecturer, Sociology
A.B., University of Michigan; M.A., University of Wisconsin

Lugli, Raymond, Adjunct Lecturer, Civil Engineering
B.S.C.E., M.S.C.E., University of Connecticut

Luria, Saul M., Adjunct Lecturer, Psychology
B.S., University of Richmond; M.A., Ph.D., University of Pennsylvania

Lyon, Dean A., Associate Professor, Electrical Engineering
E.E., Cornell University; Sc.D., Massachusetts Institute of Technology

MacBain, Malcolm, Adjunct Assistant Professor, Mathematics
B.S., Bates College

Machnik, Joseph A., Assistant Professor, Physical Education
B.S., M.S., Long Island University

Maffeo, Edward J., Assistant Professor, Humanities
B.F.A., Rhode Island School of Design; M.A., Columbia University

Maillard, Charles A., Jr., Assistant Professor, Criminal Justice
A.B., Southwest Missouri State College; J.D., St. Louis University

Mann, Richard A., Associate Professor, Mechanical Engineering
B.S., University of Wisconsin; M.S., Northwestern University; Ph.D., University of Wisconsin
Professional Engineer (Wisconsin)

Marafioti, Frank, Adjunct Assistant Professor, Mechanical Engineering
B.S.C.E., University of Massachusetts; M.S.C.E., Worcester Polytechnic Institute; Ph.D., University of Connecticut
Electric Boat Division, General Dynamics Corporation

Margiano, Raymond, Jr., Adjunct Instructor, Industrial Engineering
B.S., New Haven College; M.S.C.S., Rensselaer Polytechnic Institute

Margolis, Diane, Adjunct Lecturer, Sociology
B.A., University of Bridgeport

Marra, Anthony J., Adjunct Assistant Professor, Mathematics
B.S., Manhattan College; M.S., Purdue University; M.S., Rensselaer Polytechnic Institute

Martin, John C., Professor, Civil Engineering
B.E., M.E., Yale University
Professional Engineer (Conn.)

Marx, Paul, Associate Professor, English
B.A., University of Michigan; M.F.A., University of Iowa; Ph.D., New York University

Mathieu, Bertrand M., Assistant Professor, English
B.A., Nasson College; M.A., University of Arizona

Mathog, Alan D., Adjunct Instructor, Economics
B.S., Wharton School of Finance; M.S., Southern Connecticut State College
Mathog & Co., Inc.

Mayer, Matthew, Adjunct Assistant Professor, Political Science
B.A., Harvard University; J.D., Yale University

McAuliffe, Paul, Adjunct Lecturer, Political Science
B.A., Yale University

McCain, Morris, Adjunct Lecturer, Political Science
B.A., Carleton College; M.A., New College, England

McDonald, James E., Adjunct Instructor, Criminal Justice
B.A., San Jose State College; M.P.A., City College of New York
Sergeant, Identification Division, Connecticut State Police

McEnerney, Stuart J., Adjunct Associate Professor, Mathematics
B.S., Southern Connecticut State College; M.A., University of Connecticut
South Central Community College

McGinnis, J. Richard, Jr., Adjunct Lecturer, Humanities
B.A., Southern Connecticut State College

Mei, Donald N., Adjunct Instructor, Accounting
B.S., University of Pennsylvania
C.P.A. (Conn.)

Moffitt, Elizabeth J., Assistant Professor, Humanities
B.F.A., Yale University; M.A., Hunter College

Montague, Richard A., Assistant Professor, Industrial Engineering
B.S., New Haven College; M.S.I.E., Columbia University

Moore, Robert E., Adjunct Assistant Professor, Civil Engineering
B.S.E., M.S., University of Connecticut
District Sanitary Engineer, State of Connecticut Water Resources Commission

Morris, Harris L., Adjunct Assistant Professor, Chemistry
B.Engr., M.S., Stevens Institute of Technology; Ph.D., University of Michigan
Senior Research Chemist Polymer Physics, Uniroyal, Inc., Naugatuck

Mosko, Raymond D., Instructor, Criminal Justice
B.A., University of Bridgeport; M.S., Florida State University

Moss, Dorothy, Adjunct Assistant Professor, English
B.A., M.A., University of Rochester

Muirden, Sydney J., Adjunct Lecturer, English
B.A., William Jewell College; M.A., M.R.E., Yale University

Muller, Karl, Adjunct Instructor, Business Administration
B.S., Penn Morton College; M.B.A., Drexel University

Mulvey, John P., Adjunct Instructor, Electrical Engineering
B.S.E.E., University of Connecticut
Staff Engineer, Southern New England Telephone Company

Munro, Bruce, Adjunct Assistant Professor, Business Administration
B.S., M.B.A., University of Rhode Island
Electric Boat Division, General Dynamics Corporation

Murphy, Daniel B., Adjunct Instructor, Mechanical Engineering
B.S., University of Connecticut; M.S.M.E., Rensselaer Polytechnic Institute
Professional Engineer (Conn.)
Lycoming Division, AVCO Corp.

Murray, William H., Adjunct Instructor, Mechanical Engineering
A.S.S., Bridgeport Engineering Institute; B.S.M.E., New Haven College
Lycoming Division, AVCO Corp.

Musgrove, George, Adjunct Lecturer, Sociology
B.A., Yale University

Mustaro, Vincent A., Adjunct Instructor, Reading
B.S., M.S., Southern Connecticut State College

Naccarato, David, Assistant Professor, Mathematics
B.A., St. Mary of the Plains College; M.A., Wichita State University

Nadkarni, Vasent, Adjunct Assistant Professor, Marketing, Graduate School
B.Com., University of Bombay; M.B.A., Ph.D., New York University

Nahmanson, Stephen, Adjunct Assistant Professor, Business Administration
B.S., Brooklyn College
C.P.A. (New York)

Nash, Mae, Adjunct Instructor, English
B.A., College of St. Rose

Nation, James G., Adjunct Instructor, Mathematics
B.S., University of Connecticut
Engineer, The United Illuminating Company

Neuse, Elizabeth C., Adjunct Associate Professor, English
B.A., St. Lawrence University; M.A., Cornell University

Newell, John E., Adjunct Special Lecturer, Chemistry
B.A., University of British Columbia
Analytical Research Department, United States Rubber Company

Nordlund, Kai K., Assistant Professor, Business Administration
LL.B., University of Helsinki; LL.M., Columbia University; D.J.S., New York Law School

Nyce, William H., Associate Professor, Chemistry
B.S., University of Pennsylvania; M.S., Southern Connecticut State College

Oberle, Roger A., Adjunct Lecturer, Humanities
B.F.A., Washington University School of Fine Arts; M.F.A., Yale University

O'Brien, Robert V., Jr., Adjunct Lecturer, English
B.A., Brown University; M.A., Fairfield University; M.B.A., University of Connecticut

Okam, Hilary, Adjunct Lecturer, English
B.A., University of Nigeria; Ph.D., Humaines Universite de Bordeaux, France

O'Keefe, Daniel, Assistant Professor, Electrical Engineering
B.E.E., City College of New York; M.S.E.E., Carnegie-Mellon University

Oldham, Harold F., Adjunct Instructor, Business Administration
B.B.A., Pace College; M.S., Columbia University

Olgin, Philip, Professor, Education
B.S ., Ed.M., Ed.D., Rutgers University

Osborne, Laura Z., Adjunct Associate Professor, English
A.B., Vassar College; M.A., New York University

Oslander, Marylou, Adjunct Instructor, English
B.S., Central Connecticut State College

Ostergren, Christopher, Adjunct Instructor, Humanities
B.A., Yale University

Oulundsen, Terry O., Adjunct Assistant Professor, Business Administration, Graduate School
B.A., Trinity College; M.B.A., Columbia Business School; M.S., Rensselaer Polytechnic Institute
Market Research Manager, The Southern New England Telephone Company

Pardi, Louis, Adjunct Assistant Professor, Business Administration
B.S., Rensselaer Polytechnic Institute; M.B.A., University of Hartford

Parent, Richard E., Adjunct Assistant Professor, Chemistry
B.S., University of Massachusetts; M.S., University of Bridgeport

Parker, Joseph, Associate Professor, Economics
B.A., Lehigh University; M.A., Ph.D., University of Oklahoma

Patla, Barbara, Adjunct Instructor, Reading
B.A., St. Joseph College; M.Ed., Hillyer College; M.A., Boston College

Perillo, Michael, Adjunct Instructor, Reading
B.S., University of Scranton; B.S., M.A., Southern Connecticut State College
Southern Connecticut State College

Petersen, Willard, Assistant Professor, Economics
B.A., Yale University; M.B.A., Tuck School of Business Administration, Dartmouth College

Plotnick, Alan, Professor, Economics
B.A., Temple University; M.A., Ph.D., University of Pennsylvania

Porter, Richard, Adjunct Lecturer, Political Science
A.B., Dartmouth College

Preiss, Gordon W., Instructor, Mechanical Engineering
B.S.M.E., New Haven College; M.S.M.E., University of Massachusetts

Puglia, Salvatore A., Adjunct Instructor, Chemistry
B.S., Fairfield University; M.S., Boston College
The Upjohn Company

Quinlan, Mary K., Adjunct Instructor, Mathematics
A.B., Albertus Magnus College

Raccio, Frank J., Adjunct Assistant Professor, Business Administration
B.S., Quinnipiac College; B.S., University of Bridgeport; LL.B., Fordham University

Rayner, Charles F., Adjunct Instructor, Business Administration
B.S., University of Rhode Island; M.B.A., Seton Hall University

Reams, Dinwiddie C., Jr., Associate Professor, Science and Biology
B.Ch.E., University of Virginia; M.Eng., D.Eng., Yale University

Reimer, Richard, Associate Professor, Business Administration
B.B.A., University of Commerce, Vienna; M.S., Columbia University
C.P.A. (Conn.)

Rethis, Michael, Adjunct Lecturer, Humanities
Ph.D., University of Munich

Richard, Ronald R., Adjunct Instructor, Industrial Engineering
B.A., Mathematics, Holy Cross College; B.A., St. Mary's Seminary
International Business Machines Corporation

Robertson, Philip S., Adjunct Instructor, Mathematics
B.A., Southern Connecticut State College

Robillard, Douglas, Professor, English
B.S., M.A., Columbia University; Ph.D., Wayne State University

Roble, Ahmed, Adjunct Assistant Professor, Business Administration
B.S., Haile Selassie University, Ethiopia; B.A., M.A., Colorado State University

Roche, William F., Adjunct Instructor, Criminal Justice
A.S., B.S., University of New Haven
Captain, Records and Communications Division, New Haven Police Department

Ross, Bertram, Assistant Professor, Mathematics
M.S., Physics, Wilkes College; M.S., Mathematics, Courant Institute of Mathematical Sciences, New York University
Professional Engineer (New York, Ohio)

Rottman, Myrna, Adjunct Assistant Professor, English
A.B., Smith College; M.S., Southern Connecticut State College

Saleeby, Buddy B., Assistant Professor, Mechanical Engineering
B.S.M.E., Cooper Union; M.A.M.E., Ph.D., Northwestern University

Sandman, Joshua, Assistant Professor, Political Science
B.A., M.A., New York University

Santangelo, Daniel, Adjunct Instructor, Business Administration
B.S., University of New Haven; M.B.A., City University of New York

Sarosi, Oliver, Professor, Economics
B.C.S., New York University; M.S., Ph.D., Royal Hungarian University

Sawhney, Shiv. L., Assistant Professor, Business Administration
B.A., LL.B., Delhi University; M.B.A., Ph.D., New York University

Schaefer, George A., Assistant Professor, Business Administration
B.S., University of Rochester; M.B.A., University of Bridgeport

Schiessl, Henry W., Adjunct Assistant Professor, Chemistry
B.S., Chem. Eng., Cornell University; Ph.D., Science, University of Heidelberg
Research Division, Olin Corporation

Schiro, George J., Adjunct Instructor, History
B.A., St. Joseph's College; M.A., Fordham University
Quinnipiac College

Schnabel, Joachim W., Adjunct Instructor, Business Administration
B.A., Yale University; M.B.A., Columbia University

Scholl, William F., Jr., Associate Professor, Humanities
B.A., Davidson College; B.D., Union Theological Seminary

Scopelliti, John J., Adjunct Instructor, Industrial Engineering
B.S.I.E., New Haven College

Sedlik, Earl D., Adjunct Assistant Professor, Business Administration
B.S., Rensselaer Polytechnic Institute; M.B.A., Harvard University

Segal, Elliot A., Adjunct Lecturer, Political Science
B.A., Brandeis University; M.P.H., M.V.S., Yale University

Seretny, Albert, Adjunct Assistant Professor, Economics
B.A., M.A., University of Pittsburgh

Sherif, Ahmed, Associate Professor, Criminal Justice
B.S., University of Cairo, Egypt; Ph.D., University of Mainz, West Germany

Shepard, Edward W., Adjunct Instructor, Business Administration
B.S.M.E., New York Maritime College; M.S.M.E., Northeastern University; M.B.A., University of Connecticut

Sherwood, Franklin B., Associate Professor, Economics
B.A., M.A., University of Connecticut; Ph.D., University of Illinois

Shields, Geoffrey B., Adjunct Lecturer, Political Science
A.B., Harvard University

Silbert, Louis, Assistant Professor, Business Administration
B.S., M.B.A., University of Hartford

Smith, Donald M., Assistant Professor, English
A.B., Guilford College; A.M., Columbia University

Smith, Janet, Adjunct Lecturer, Political Science
B.A., Albertus Magnus College; M.A., Boston College

Smith, Patricia Q., Adjunct Lecturer, Sociology
B.A., University of Connecticut; M.A., Southern Connecticut State College

Smith, Warren J., Associate Professor, Business Administration
B.S., University of Connecticut; M.B.A., Northeastern University

Sniegowski, Bernard J., Adjunct Lecturer, Industrial Engineering, Graduate School
B.S.M.E., Western New England College

Sommers, Alexis N., Associate Professor, Industrial Engineering
B.M.E., Cornell University; M.S., Rutgers University; Ph.D., Purdue University

Sommers, Patricia, Adjunct Instructor, Psychology
B.A., Cornell University

Stanley, Richard M., Assistant Professor, Mathematics
B.E.S., The Johns Hopkins University; M.S., M.Phil., Ph.D., Yale University

Staugaard, Burton C., Associate Professor, Science and Biology
A.B., Brown University; M.S., University of Rhode Island; Ph.D., University of Connecticut

Steinhauser, Harry H., Jr., Associate Professor, Mechanical Engineering
B.S.E., Ch.E., Princeton University; Ph.D., University of Michigan

Stevenson, Kay G., Instructor, English
B.A., Agnes Scott College; M.A., University of California; Ph.D., Yale University

Stolper, Edwin F., Adjunct Associate Professor, Civil Engineering
B.C.E., City College of New York; M.C.E., New York University
Professional Engineer (Conn.)
Sikorsky Division, United Aircraft Corporation

Stone, Michael J., Instructor, Industrial Engneering
B.S.I.E., M.S.I.E., Columbia University

Strother, Horatio, Adjunct Assistant Professor, History
B.A., M.A., University of Connecticut
South Central Community College

Sugrue, Edward F., Adjunct Associate Professor, Mathematics
B.A., Yale University; M.S.T., Union College

Sullivan, John J., Assistant Professor, English
B.A., St. John's University; M.A., Purdue University; Ph.D., University of Virginia

Surti, Kantilal K., Assistant Professor, Electrical Engineering
B.E., University of Gujarat, India; M.E.E., University of Delaware

Suryatmodjo, Kun, Adjunct Assistant Professor, Economics
M.A., Williams College

Svara, James H., Adjunct Assistant Professor, Political Science
B.A., University of Kentucky; M.A.M.P., Yale University

Taitsman, Esther, Adjunct Lecturer, Psychology
A.B., University of Rochester; B.S., East Stroudsburg State College; M.A., SUNY at Brockport; M.Ed., Rutgers University

Tatangelo, George, Adjunct Lecturer, Industrial Engineering
B.S., New Britain Teacher's College; M.S., University of Bridgeport
Waterbury State Technical College

Teluk, John, Assistant Professor, Economics
B.A., Graduate School of Economics, Munich; B.S., New Haven College; M.A., Free University, Munich

Tenenbaum, Mircea, Adjunct Instructor, Electrical Engineering
M.S.E.E., Bucharest Polytechnic Institute
International Instruments, Inc.

Theilman, Ward, Associate Professor, Business Administration
B.A., Ph.D., University of Illinois

Tiernan, George R., Adjunct Professor, Business Administration
B.A., Yale University; LL.B., Cornell University
Attorney at Law

Tindall, Alphonso, Adjunct Assistant Professor, Sociology
A.B., Lincoln University; M.A., New York University; M.S.W., University of Pittsburgh

Tobin, Joseph M., Jr., Adjunct Assistant Professor, Business Administration
B.S., Villanova University; J.D., Fordham University, School of Law
C.P.A. (Conn.)
Arthur Young and Company

Totten, Marvin O., Adjunct Assistant Professor, Mathematics
B.S., University of Hartford; M.A., Fairfield University

Trombi, Paul E., Adjunct Instructor, Business Administration
B.S., Boston College; M.B.A., Columbia University

Tscholl, Ekkehard J. H., Associate Professor, Physics
Diplomingenieur, Technische Hochschule Wien, Austria; Dr. Techn., Technische Hoogeschool Eindhoven, The Netherlands

Turner, Charles E., Adjunct Lecturer, English
B.A., Wayne State University; M.F.A., Yale University Drama School

Turner, Mary E., Adjunct Lecturer, Sociology
B.A., Colby; M.A., New York University

Turner, Porter H., Adjunct Instructor, Psychology
B.A., Maryville College, Tennessee

Tyndall, Bruce, Associate Professor, Mathematics
B.A., M.S., University of Iowa
(Leave of Absence)

Van Suetendael, Peter T., Assistant Professor, Sociology
B.A., University of Bridgeport; M.S., Ed.D., Columbia University

Vasileff, Henry D., Assistant Professor, Business Administration
B.A., M.A., University of Toronto; M.B.A., University of Connecticut; Ph.D., University of Toronto

Vieira, Florindo, Assistant Professor, Physical Education
B.S., Quinnipiac College; M.S., Southern Connecticut State College

Walters, Ruth, Adjunct Lecturer, Psychology
B.S., East Stroudsburg State College; M.A., Rutgers University

Warner, Thomas C., Jr., Professor, Mechanical Engineering
B.E., Yale University; M.S., Massachusetts Institute of Technology
Professional Engineer (Conn.)

Warner, Thomas III, Adjunct Instructor, Mathematics and English
B.A., Lehigh University

Waszmer, Robert F., Adjunct Assistant Professor, Physics
B.E.E., Rensselaer Polytechnic Institute
Tower Olschan Corp.

Weinstein, Josef A., Adjunct Assistant Professor, Business Administration
B.A., Yale University; LL.B., University of Connecticut
Sperandeo, Weinstein & Donegan

Whelan, Frank, Adjunct Instructor, Industrial Engineering
B.S., New Haven College

Wiener, Bernard, Associate Professor, Business Administration
B.S., M.B.A., New York University

Willard, Lawrence F., Adjunct Instructor, English
A.B., Middlebury College

Williams, Jeffrey L., Instructor, Business Administration
A.A., Dean Junior College; B.S., New Haven College; M.B.A., University of Bridgeport

Williams, Vance, Adjunct Lecturer, Political Science
B.A., New York University
L.L.D., Yale Law School

Wilson, David, Adjunct Instructor, Science and Biology
B.S., New Haven College

Winn, Ben Thomas, Adjunct Associate Professor, Science and Biology
B.A., University of California at Berkeley; M.A., University of Utah

Wise, Robert, Adjunct Lecturer, Political Science
B.A., University of Virginia

Woehlk, Heinz, Adjunct Instructor, English
B.A., New Haven College

Woodworth, Robert W., Special Lecturer, English
A.B., Bowdoin College

Wright, H. Fessenden, Professor, Science and Biology
A.B., Oberlin College; M.S., Ph.D., Cornell University
Registered Chemical Consultant, F.A.I.C.

Wright, William H., Adjunct Associate Professor, Science and Biology
B.S., University of Vermont; M.S., Boston University

Wyckoff, Lydia L., Adjunct Associate Professor, English
M.F.A., University of Lausanne
Heye Foundation, New York

Wynschenk, Donald, Assistant Professor, Health and Physical Education
B.S., M.S., Southern Connecticut State College

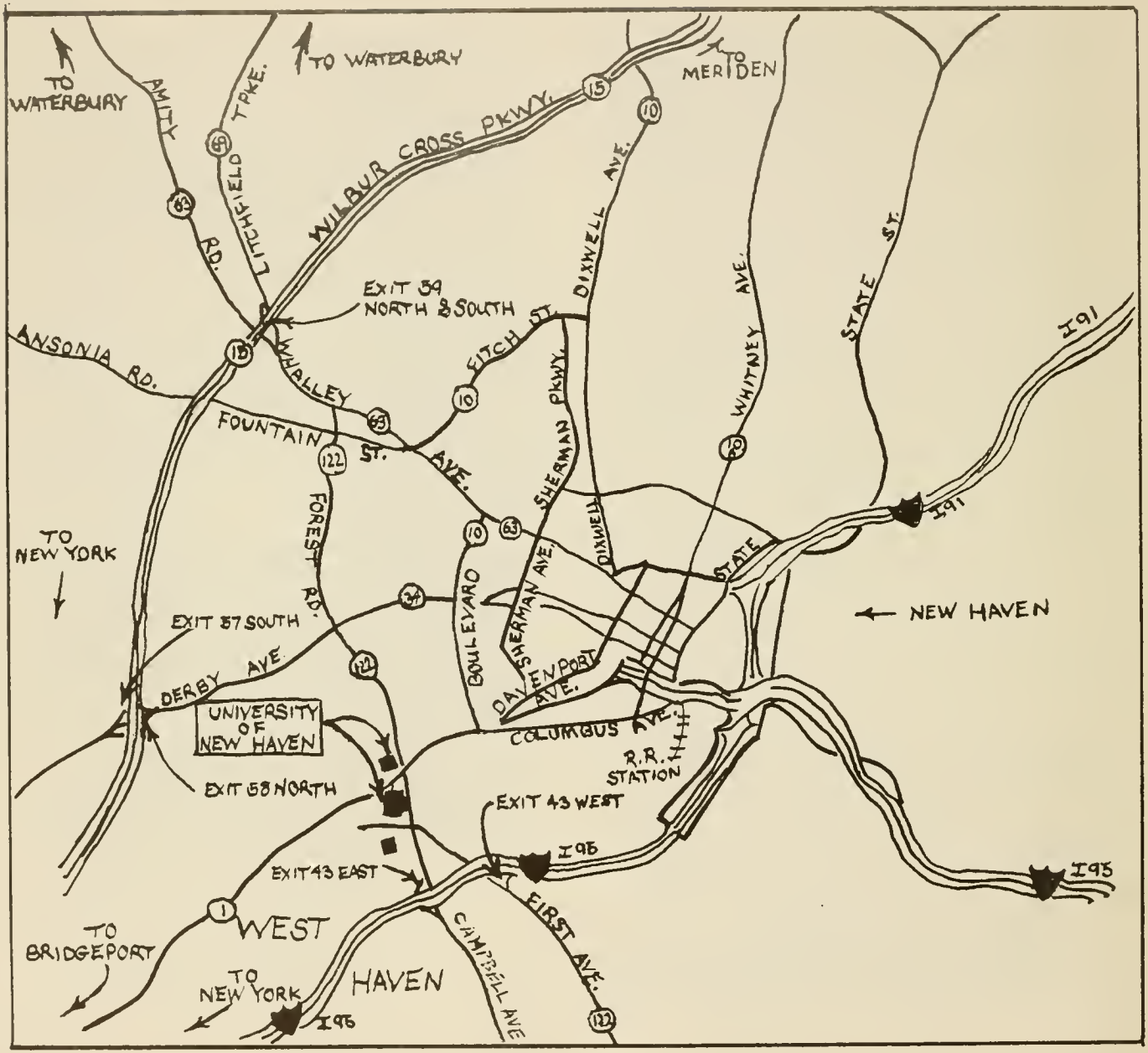
Yanover, Ruth W., Associate Professor, Business Administration
B.A., M.A., University of Wisconsin

York, Michael W., Assistant Professor, Psychology
B.A., M.A., Southern Methodist University; Ph.D., University of Maryland

Zabinski, Toby, Adjunct Professor, English
B.S., Ohio State University; M.A., University of Connecticut

Zilveti, Halina J., Adjunct Assistant Professor, English
B.S., Boston University; M.A., Columbia University

Zottola, Armand, Adjunct Assistant Professor, Economics, Graduate School
A.B., M.A., Ph.D., Catholic University of America


TO WATERBURY
AMITY RD.
LITCHFIELD TPKE.
TO WATERBURY
WILBUR CROSS PKWY.
TO MERIDEN
EXIT 59 NORTH & SOUTH
DIXWELL AVE.
WHITNEY AVE.
STATE ST.
I91
ANSONIA RD.
WHALLEY AVE.
FOUNTAIN ST.
FITCH ST.
SHERMAN PKWY.
FOREST RD.
BOULEVARD
DIXWELL
STATE
TO NEW YORK
NEW HAVEN
EXIT 57 SOUTH
DERBY AVE.
DAYTON PORT AVE.
UNIVERSITY OF NEW HAVEN
COLUMBUS AVE.
R.R. STATION
EXIT 58 NORTH
EXIT 43 WEST
I95
EXIT 43 EAST
FIRST AVE.
CAMPBELL AVE
TO BRIDGEPORT
WEST HAVEN
TO NEW YORK
I95

INDEX

Academic Calendar 6
Academic Scholarships 15, 16
Academic Standards 23
Accident Insurance 20
Accounting Courses, Desc. 69
Accounting Major 48
Accreditations and Memberships 9
Administration, Officers, and Staff 113
Admission 10
  Procedure 12
  Transfers 11
Advanced Placement 10
Advanced Standing 11
Advanced Study 25
Aid Applications 15
Alumni Association 21
  Advisory Council 22
    Advisory Council Membership 118
American Studies 36
Art Courses, Desc. 70
Art Major 36
Arts and Sciences, School of 35
  Admission Requirements 36
  Associate Degree 44
    Majors
      Biology 44, 46
      Commercial and Advertising Art 44, 45
      General Studies 44, 45
      Journalism 44, 46
  Bachelor Degree 36
    Core Requirements 42
    Freshman Year Program 43
    Matriculation 36
    Requirements for the Degree 36
    Majors
      American Studies 36
      Art 36
      Biology 37
      Chemistry 38
      Economics 38
      English 39
      Environmental Studies 39
      History 40
      Mathematics 40
      Physics 40
      Political Science 40
      Psychology 41
      Sociology 41
      Social Welfare 41
      Teacher Education 42
Assemblies 20
Associate Degree Programs
  Arts and Sciences 44
  Business Administration 50, 57
  Engineering 62, 63
Athletic Activities 19
Attendance Regulations 26
Biology Courses, Desc. 103
Biology Major 37, 44, 46
Board of Governors 111
Bookstore 20
Bursary Work 18
Business Administration Courses, Desc. 71
Business Administration, School of 47
  Admission Requirements 50
  Associate Degree Program 50, 57
  Bachelor Degree Program 48, 52
  Majors
    Accounting
    Criminal Justice—
      Correctional Administration 56
      Forensic Science 55
      Law Enforcement Administration 54
    Economics 52
    Finance 53
    General Management 52
    Hotel Administration 48
    Marketing 53
    Operations Management 53
    Public Administration 57
  Core Courses 51
Cafeteria 15
Calendar, Academic 6
Certification, Teacher 42
Changes in Arrangements 33
Changes in Registration 12
Chemistry Courses, Desc. 73
Chemistry Major 38
Civil Engineering Courses, Desc. 75
Civil Engineering Program 60, 64
Clubs and Organizations 19
College Work-Study 18
Commercial and Advertising Art 44, 45
Coordinated Course Offerings 27
Counseling and Health 13
Course Overload 26

Courses, Desc. 69
Accounting 69
Art 70
Biology and Science 103
Business Administration 71
Chemistry 73
Civil Engineering 75
Criminal Justice 89
Economics 76
Electrical Engineering 78
English 80
Foreign Languages 82
History 83
Hotel Administration 85
Industrial Engineering 86
Journalism 88
Materials Engineering 95
Mathematics 90
Mechanical Engineering 93
Music 96
Philosophy 97
Physical Education 98
Physics 98
Political Science 100
Psychology 101
Public Administration 102
Science and Biology 103
Sociology and Social Welfare 107, 109
Theater Arts 110
Crediting Examinations 11
Credit Programs 7
Criminal Justice, Desc. 89
Criminal Justice, Majors 54-56
Dean's List 24
Degrees, Requirements for 24
Division of Special Studies 8
Divisions of the University 7
Donor Scholarships 16
Economics Courses, Desc. 76
Economics Major 38
Education, Teacher 42
Electrical Engineering Courses, Desc. 78
Electrical Engineering Program 60, 64
Employment, Student 18
Engineering Advisory Council 119
Engineering, School of 59
Admissions Requirements 60
Associate Degree 62, 63
Bachelor Degree 60, 64
Civil 60, 64
Electrical 60, 64
Industrial 61, 65
Materials 61, 65
Mechanical 61, 66
English Courses, Desc. 80
English Major 39
Evening Programs 7, 21
Expenses 29-31
Faculty 125
Organization 124
Fees 29-31
Finance Major 48, 53
Financial Aid 15
Foreign Languages, Course Desc. 82
Foreign Language Requirements, Arts and Sciences 42, 43
Foreign Student Adviser 13
Fraternties and Sororities 19
General Management Major 48, 52
General Studies Major 44, 45
Grade Reports 23
Grading System 22
Graduate School 8
Grants 17, 18
Health and Accident Insurance 20
History Courses, Desc. 83
History Major 40
History of the University 4
Honors, Academic 24, 25
Housing 14
Industrial Engineering Courses, Desc. 86
Industrial Engineering 61, 65
Infirmary 20
Insurance 20
Journalism Courses, Desc. 88
Journalism Major 44, 46
Law Enforcement Assistance 18
Library 21
Loan Funds 17, 18
Management Center 9
Advisory Council 121
Marketing Major 48, 53
Materials Engineering Courses, Desc. 95
Materials Engineering Major 61, 65
Mathematics Courses, Desc. 90
Mathematics Major 41
Mechanical Engineering Courses, Desc. 93
Mechanical Engineering Program 61, 66
Music Courses, Desc. 96
Non-Credit Programs 8, 9
Off-Campus Housing 14
On-Campus Housing 14
Operations Management Major 48, 53
Organizations and Clubs 19

Overload Restrictions 26
Payment of Bills 32
Personnel Services 13
Philosophy Courses, Desc. 97
Physical Education Courses, Desc. 98
Physical Examination 20
Physics Courses, Desc. 98
Physics Major 40
Placement Service 13
Political Science Courses, Desc. 100
Political Science Major 40
Pre-Professional Programs 11
Probation 23
Psychology Courses, Desc. 101
Psychology Major 41
Public Administration 57
  Course Descriptions 102
  Advisory Council 122
Publications, Student 19
Readmission 24
Refunds 33
Registration 12, 28
Registration Changes 12
Requirements for Degrees 24
Residence 14
Residence Charges 31
Schedule Changes 12
Scholarships 15
Scholastic Regulations 22
Science and Biology Courses, Desc. 103
Social Activities 19
Social Welfare Advisory Council 123
Social Welfare Major 41
Sociology and Social Welfare Courses, Desc. 107, 109
Sociology Major 41
Sororities and Fraternities 19
Special Studies, Division of 8
Special Committees 112
Standing Committees 112, 113
Student Activities 19, 20
Student Center 20
Student Councils 19
Student Employment 18
Student Health Service 20
Student Housing 19
Student Personnel Services 13
Student Publications 19
Summer Sessions 28
Teacher Education 42
Testing 14
Theater Arts Courses, Desc. 110
Transfer Students 11
Transferability of Credit 26, 28
Transitional Studies 26
Tuition, Fees, and Expenses 29, 31
Undergraduate Credit Programs 7
Undergraduate Schools
  Arts and Sciences 35
  Business Administration 47
  Course Descriptions 69
  Engineering 59
Withdrawal 32
Work Study Program 18

UNIVERSITY OF NEW HAVEN

West Haven, Connecticut 06516

APPLICATION FOR ADMISSION – DAY DIVISION

(PRINT OR TYPE)

Date ..... 19 Male Female Sel. Serv. No. | | | | | | | | | |

Name ..... Soc. Sec. No. | | | | | | | | |
Last First Middle

Address ..... Tel. No. .....
No. Street City State Zip Code

Birthplace ..... Age Date of Birth
City State Country

For what program are you applying? ..... Country of Citizenship .....

Are you applying for: ☐ Fall ☐ Spring ☐ Summer (June) ☐ (July) Year

For information concerning dormitory or off campus housing, contact the Director of Housing.

How did you learn about the University of New Haven?

.....

.....

List High Schools and All Colleges Attended	Location (City & State)	H. S. Course and/or College Major	Dates Attended	Graduate? or Degree
1			19 to 19	
2			19 to 19	
3			19 to 19	
4			19 to 19	

NOTE: Failure to list all colleges previously attended constitutes grounds for dismissal.

Your choice of means for satisfying the admissions tests (Check one):
☐ CEEB Scholastic Aptitude Test ☐ American College Testing Program Tests
☐ University of New Haven Tests (Note: Contact University for testing dates.)

INSTRUCTIONS FOR APPLICANTS

Applications may be accepted from high school graduates, seniors anticipating graduation, and students transferring from another college with satisfactory grades.

Necessary for a completed application for admittance are:

Receipt of the completed application form with application fee payment of $15.00.

Receipt by the University of applicable high school transcripts and admission test scores. Transfer students must submit college transcripts also. It is the student's responsibility to arrange for having these transcripts sent to the University.

NOTE—University of New Haven welcomes the applications of students from all geographic areas, from public or private schools, and from all races, economic levels and religions.

Repeat full name _____ _____ _____
(Last) (First) (Middle)

If married, give wife's maiden name or husband's name _____ Number of Children—if any _____

Military Service: Branch _____ Rank _____ Dates of Service _____

Do you plan to apply for Financial Aid?

Working experience: Employer _____ City _____ Dates _____ Type of Work _____

(list present or last job first)

_____ _____ _____ _____

_____ _____ _____ _____

Father's name _____ Education _____ Living? _____

Occupation _____ Place of occupation _____

Mother's name _____ Education _____ Living? _____

Occupation _____ Place of occupation _____

No. of sisters _____ No. of brothers _____

Living with mother and father? Yes No If not, list name and address of parent or guardian with whom you live—

Name _____

Address _____
(Number) (Street) (City) (State) (Zip)

After an applicant has been otherwise accepted, he must have a physical examination by his own physician. The University provides the medical form for the physician. The University reserves the right to reject an applicant whose physical examination indicates the necessity of limitations in study.

CERTIFICATE TO BE SIGNED BY APPLICANT AND PARENT, GUARDIAN, OR SPONSOR OF MINORS

In consideration of the undertaking by the Admissions Office to process this form, the undersigned agree that the information furnished on this Application for Admission form, together with all information and materials of any kind received by the Admissions Office from any source, or prepared by anyone at its request, shall be completely confidential and shall not be disclosed to anyone, including the candidate and his family, except that the Director of Admissions may, for official purposes, in his discretion disclose any part or all thereof to such person or persons as he deems advisable.

I hereby approve the above application and I guarantee the payment of all financial obligations incurred by the applicant. I further agree and authorize the University of New Haven to publish for public relations purposes my photograph or photograph(s) in which I appear. I also further agree to support the administration in upholding the rules and regulations of the University and in maintaining high standards in all phases of university life.

* If the applicant is under 21, the applicant and parents should sign.

Applicant's Signature _____ Date _____

Parents' Signatures (Or Guardian's Signature)

Father _____ Date _____

Mother _____ Date _____

Guardian _____ Date _____

UNIVERSITY OF NEW HAVEN

West Haven, Connecticut 06516

APPLICATION FOR ADMISSION – DAY DIVISION

(PRINT OR TYPE)

Date ..... 19 Male Female Sel. Serv. No. [ ]

Name ..... Soc. Sec. No. [ ] [ ] [ ] [ ]
Last First Middle

Address ..... Tel. No. ....
No. Street City State Zip Code

Birthplace ..... Age .. Date of Birth ....
City State Country

For what program are you applying? ..... Country of Citizenship ....

Are you applying for: ☐ Fall ☐ Spring ☐ Summer (June) ☐ (July) Year

For information concerning dormitory or off campus housing, contact the Director of Housing.

How did you learn about the University of New Haven? .....

List High Schools and All Colleges Attended	Location (City & State)	H. S. Course and/or College Major	Dates Attended	Graduate? or Degree
1			19 .. to 19 ..	
2			19 to 19	
3			19 to 19	
4			19 to 19	

NOTE: Failure to list all colleges previously attended constitutes grounds for dismissal.

Your choice of means for satisfying the admissions tests (Check one):
☐ CEEB Scholastic Aptitude Test ☐ American College Testing Program Tests
☐ University of New Haven Tests (Note: Contact University for testing dates.)

INSTRUCTIONS FOR APPLICANTS

Applications may be accepted from high school graduates, seniors anticipating graduation, and students transferring from another college with satisfactory grades.

Necessary for a completed application for admittance are:

Receipt of the completed application form with application fee payment of $15.00.

Receipt by the University of applicable high school transcripts and admission test scores. Transfer students must submit college transcripts also. It is the student's responsibility to arrange for having these transcripts sent to the University.

NOTE—University of New Haven welcomes the applications of students from all geographic areas, from public or private schools, and from all races, economic levels and religions.

Repeat full name
(Last) (First) (Middle)

If married, give wife's maiden name or husband's name Number of Children—if any

Military Service: Branch Rank Dates of Service

Do you plan to apply for Financial Aid?

Working experience: Employer City Dates Type of Work

(list present or last job first)

Father's name Education Living?

Occupation Place of occupation

Mother's name Education Living?

Occupation Place of occupation

No. of sisters No. of brothers

Living with mother and father? Yes No If not, list name and address of parent or guardian with whom you live—

Name

Address
(Number) (Street) (City) (State) (Zip)

After an applicant has been otherwise accepted, he must have a physical examination by his own physician. The University provides the medical form for the physician. The University reserves the right to reject an applicant whose physical examination indicates the necessity of limitations in study.

CERTIFICATE TO BE SIGNED BY APPLICANT AND PARENT, GUARDIAN, OR SPONSOR OF MINORS

In consideration of the undertaking by the Admissions Office to process this form, the undersigned agree that the information furnished on this Application for Admission form, together with all information and materials of any kind received by the Admissions Office from any source, or prepared by anyone at its request, shall be completely confidential and shall not be disclosed to anyone, including the candidate and his family, except that the Director of Admissions may, for official purposes, in his discretion disclose any part or all thereof to such person or persons as he deems advisable.

I hereby approve the above application and I guarantee the payment of all financial obligations incurred by the applicant. I further agree and authorize the University of New Haven to publish for public relations purposes my photograph or photograph(s) in which I appear. I also further agree to support the administration in upholding the rules and regulations of the University and in maintaining high standards in all phases of university life.

° If the applicant is under 21, the applicant and parents should sign.

Applicant's Signature Date

Parents' Signatures (Or Guardian's Signature)

Father Date

Mother Date

Guardian Date

UNIVERSITY OF NEW HAVEN
CONNECTICUT

UNIVERSITY OF NEW HAVEN, WEST HAVEN, CONNECTICUT 06516